Post-traumatic Stress Disorder (PSTD) of Health Professionals Post-COVID-19 Period: Insights from Zimbabwean Nurses

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Abstract

The focus of the study is to highlight post-traumatic stress disorders for Zimbabwean nurses in the post-Covid-19 period. In this study, Bandura's social cognitive learning theory was used to understand the research phenomenon. The social cognitive learning theory of Bandura entails that compassion fatigue is more common in people who work in professions where they are tasked with supporting people who have experienced trauma. Bandura's vicarious capability has it that human beings learn through experience and observation, and that, through over exposure to people in trauma, the healthcare giver experiences similar mental health issues. This is common among nurses. Continual exposure to other people's trauma can take a toll on nurses who, resultantly, become vulnerable to mental health issues. The study used mixed method approach that puts together quantitative and qualitative methods to collect and analyse data. Nurses in Shurugwi were the population from which convenience sampling technique was used to draw a sample of forty participants. Structured questionnaires and semi-structured interviews were employed to collect data. Results of the study indicate that nurses were on the frontlines during the pandemic and thus faced high levels of stress, anxiety, and burnout as they cared for critically ill patients and witnessed the devastating impact of the virus. Many nurses experienced symptoms of trauma and PTSD, which could have long-term effects on their mental health and well-being. Consequently, health professionals may also experience PTSD with physical health consequences such as high blood pressure, cardiovascular diseases, and chronic pain due to the prolonged stress and trauma they have experienced. The remedies suggested in the study include the enhanced awareness of the mental health of healthcare employees, especially by hospital administrators and authorities. During disease outbreaks, healthcare workers ought to be aware of their vulnerability to stress. Psychological well-being of healthcare workers should be promoted by hospital support systems and occupational health policy. Counselling is important for managing and promotion of wellness programmes for health workers.

Keywords: trauma, disorder, mental health, COVID-19.

Introduction

This study examined post-traumatic stress disorders among nurses in Shurugwi, Zimbabwe, so as to establish their coping mechanisms during the post-COVID-19 period. The onset of the Coronavirus in 2019 marked a rapid spread of the disease, leading to rapid transmission and high mortality , causing a significant psychological impact on the populace. Interpersonal relationships, daily work, and mental health were affected by the virus, which changed our everyday life. The emotional and psychological effects of COVID-19 affected all members of society including nurses. PTSD is a mental health challenge experienced after having been exposed to trauma. It has negative effects, especially when not addressed. The study sought to explore PTSD among nurses in the post-COVID-19 period.

Background to the study

Healthcare professionals experienced anxiety, depression and PTSD during and after the outbreak, according to previous research on other infectious diseases (Lasalvia et al., 2021; Bonetto et al., 2022). The necessity to carry out this study was due to the possibility that health professionals (HPs) also experienced post-COVID-19 PTSD. Furthermore, nursing provides the largest occupational group that is in constant contact with their patients.

The Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR) describes traumatic exposure as a traumatic event, accompanied by symptoms in four categories: intrusion, avoidance, negative changes in cognitions and mood, and changes in arousal and reactivity (American Psychiatric Association, 2022). Maunder et al. (2020) studied these risks in the HPs population during the 2003 SARS outbreak. Their habits of smoking and drinking increased, they experienced burnout and distress, and they lost interest in interactions with their patients. During the recent COVID-19 pandemic, health professionals were in direct contact with patients, taking care of several potentially infectious people, and experimenting with physical and psychological pressure (Guo et al., 2020). The medical professionals offer care to and share concern with their patients. Such roles are overwhelming and, as a result, some nurses could have developed PTSD in the post-COVID-19 period. A similar study on the impact of the 2014 Ebola virus and the 2015 Middle East Respiratory Syndrome MERS outbreak has shown that some nurses experienced high levels of emotional stress, anxiety, depression and post-traumatic stress.

Factors that lead to PTSD among nurses in the post-COVID-19 period

The epidemic caused significant changes regarding the economy, family and social life, but it remains unclear how these changes encompass the emotional and psychological symptoms of nurses in Zimbabwe. Preventing PTSD in healthcare workers exposed to the COVID-19 pandemic was a challenge world-wide. Due to their exposure to patients, healthcare workers were likely to experience acute and chronic, often unpredictable, occupational stressors leading to PTSD. According to Ettorre et al. (2021) the psychological impact of COVID-19 on healthcare workers represents a special challenge for healthcare systems throughout the world. Nurses represent the first line of fighters treating patients with COVID-19, and every day they were faced by a high risk of being infected and spreading the virus to their families and other people.

A body of evidence highlights that past infectious disease outbreaks, including the severe acute respiratory syndrome (SARS), the Middle East respiratory syndrome (MERS), and the 2009 novel influenza A (H1N1), were associated with mental health issues among health workers (HWs), mostly post-traumatic stress symptoms (PTSS). Research by Xiao et al. (2021) revealed that healthcare workers employed in environments prone to SARS were two to three times more likely to have elevated PTSS levels than those not exposed. As has already occurred in past outbreaks, the post-COVID-19 period is also highly likely to expose nurses to PTSD.

The nurses' risk of suffering from symptoms of post-traumatic stress disorder increased as a result of their efforts to continuously fight several COVID-19 related conditions. This study on PTSD among nurses in the post-COVID-19 period focused on the health delivery system's intervention strategies, and sought to highlight the characteristics of the pandemic-related traumatic experiences.

As new pathogens are discovered, the prevalence of infectious diseases increase, posing enormous challenges for society regarding disease control (Esposito, 2016). The high level of stress, anxiety, and depression experienced by medical personnel during the SARS epidemic, according to a survey, may have had a lasting psychological impact (Preti et al. 2020). Extreme physical and psychological challenges have resulted due to these intense and highly controlled working environment. Work has become more challenging for nurses due to variations in working intensity and the working environment while providing assistance during disaster (Theoreli, 2020). This investigation in Zimbabwe sought to highlight factors that trigger

medical professionals to develop post-traumatic stress disorder (PTSD) following the COVID-19 pandemic, and suggests coping strategies.

The nature and context of problems affecting the well-being of nurses and the health delivery system

According to Yung (2020), healthcare workers often wonder how to strike a balance between their moral obligation to care for patients and their fear of contracting the disease and passing it on to their loved ones. Nurses face challenges in balancing their own well-being and professional obligations. Banerjee (2020) has it that sometimes healthcare workers find themselves in situations where they might have to make the agonising decision of depriving ventilator support to critical patients who are unlikely to survive, and to allocate it to less critical patients with better chances of survival.

As reported in an Italian study, the vulnerability of colleagues and family members was a major cause of concern for HPs (Rossi 2020). Anxiety was a concern, particularly in the majority of the COVID-19 studies. Anxiety is a state of not being certain of the next moment.

The most important factor in healthcare workers with high anxiety, according to Kang (2019), was being suspected of having COVID-19 infection, especially compared to those who were not suspected. Nurses in China reported that a lack of protection against the disease and difficulties keeping up with daily changing knowledge/or skills contributed to fear. Naser (2020) states that the fear of transmitting COVID-19 led many health professionals to isolate from their families for months.

Intervention strategies available to promote the provision of coping mechanisms for nurses suffering from PTSD

Rummer (2020) asserts that leaders need to be aware of the extent and sources of stress among healthcare workers during disease outbreaks. Hospital support systems and occupational health policy should therefore promote the psychological well-being of healthcare workers. Improving the understanding of nurses' fears and the factors associated with those fears would be helpful to people involved in response planning for future outbreaks of infectious disease. To manage such situations, counselling is important. Saeb (2020) mentioned that stigmatisation of nurses affected by mental health problems can be minimised through an integrated administrative and psychosocial response to challenges that are caused by outbreaks. Health delivery system that involves counselling services for the healthcare workers create a safe and secure environment. The risk of mental health problems during the COVID-19 outbreak was

lower for healthcare workers who utilised mental healthcare services, according to Kang (2020).

Marimbe et al. (2016) assert that an understanding of care givers' experience with chronic stress is necessary for designing culturally appropriate support structures for them. Many participants pointed out their core beliefs and the meaning they attached to their work as being stressful. In Zimbabwe, caregivers require support from healthcare organisations to help them deal with stress and taking care of their clients with minimal adverse impact on their own mental health.

According to Smith et al. (2022), social support plays a critical role in resilience. Application of this knowledge to development and optimisation of preventive interventions requires knowledge of how to extract social support benefits and prevent harm. Bandura's social cognitive theory of stress adaptation examines how social environments influence resilience. High rates of burnout, job turnover, psychiatric distress and suicide risk are some of the mental health problems that preceded the pandemic.

Social harms can be difficult to avoid due to misguided, ineffective, or even negative or invalidating reactions from members of HPs social networks (Khan, 2021). Key innovation is represented by community level intervention programmes such as greater resilience information toolkit (GRIT). The toolkit was designed to empower the social system of the community or healthcare unit to respond to threatening and changing environmental demands so as to increase the care that communities and social networks can naturally provide (Shechter, 2021). This would raise the baseline level of resilience. It was therefore important to conduct this study so as to establish the coping mechanisms of nurses to PTSD in the COVID-19 period. Subsequently, mental health challenges among healthcare professionals could be reduced by caring and supporting them after COVID-19. This would enhance the health delivery system's capacity to deal with future outbreaks. Communities can be hopeful and resourceful with counselling.

The study employed the social cognitive learning theory. This is based on the understanding that people learn from interactions with others in the social context. In their caring role, nurses observe patients in trauma, some with chronic illnesses and some dying. COVID-19 made the caring role intense and, in the process of being empathetic, nurses could not avoid compassion fatigue and burnout. According to Figley (2022), compassion fatigue is more common in

people who work in professions where they are tasked with supporting people who have experienced trauma. This is common in nurses. Continual exposure to other people's trauma can take a toll; consequently, nurses become vulnerable to mental health conditions. Even when the nurses want to empathise, they may find that they simply do not have the emotional and physical resources to do so.

Compassion fatigue involves emotional and physical exhaustion that can affect people who have been exposed to other people's traumas and stressors. It is characterised by a decreased ability to empathise, feelings of helplessness, and burnout from supporting those who are suffering.

Research Approach

Mixed research refers to a research approach that involves blending qualitative and quantitative approaches as well as tenets of other paradigms (Johnson & Christensen, 2014). Given the nature of the study phenomenon, a mixed research approach was found to be suitable because it helped to improve the quality of research by mixing up the strengths of both qualitative approach and quantitative approach. The main strength of mixed research, according to Johnson and Christensen (2008), is its ability to apply its findings to other populations. A mixed approach has been found to be useful and appropriate since it requires the reduction of the phenomenon under study to numerical values, which calls for statistical analysis of data, as well as explanation and feedback, which calls for qualitative data analysis (Apuke, 2017). Subsequently, using quantitative approach only may prove to be futile in comprehending the perspective in which individuals act. Qualitative research makes up for this when using mixed design.

The sample size between 30 and 500 at the 5% confidence level was adequate for many social science researchers, according to Delice (2018). The minimum sample size suggested by Anaekwe is 10%. The sample size for this research was 40 participants, calculated using online sample size calculator at 95% confidence level. There is a 5% margin of error from a population of 300. This is true for QUAN as well. The size of the sample was determined at saturation point under QUAL (Creswell & Creswell 2018).

Kothari (2006) points out that structured questionnaires are incredibly easy to use and, above all, inexpensive to analyse. In this study, the researcher distributed structured questionnaires to 25 nurses from Shurugwi Hospital in Zimbabwe. Semi-structured interviews often contain

open-ended questions and discussions may diverge from the interview guide. The researcher interviewed 15 nurses from the hospital. ln total 40 health professionals participated in this study. This study used descriptive statistical tools such as tables, bar graphs, pie charts, and measures of central tendency tool to analyse data collected through the QUAN approach.

Interviews were recorded and transcribed manually by the researcher for data generated through the QUAL approach. Data gathered through semi-structured interviews was analysed via content analysis. Analysing and interpreting themes and sub-themes enabled the generation of meaningful data. The results from both approaches were compared to see if there were any convergences, differences, or combinations after the QUAN data analysis.

Results

Table 1: Demographic Data of Participants N=40

	QUALIFICATIONS		
Gender	**Diploma**	**Degree**	**Total**
Male	13(32.5%)	2(5%)	15(37.5%)
Female	24(60%)	1(2.5%)	25(62.5%)
Total	37(85.5%)	3(7.5%)	40 (100)

The participants understood the items in the instruments since they were all educated. The results can therefore be trusted.

Table 2: The Age Group of Participants N=40

	Age group					
Gender	Below 25	25-35	35-45	45-55	55-65	Total
Male	2(5%)	7(17.5%)	4(10%)	2(5%)	-	15(37.5%)
Female	3(7.5%)	10(25%)	8(20%)	2(5%)	2(5%)	25(62.5%)
Total	5(12.5%)	17(42.5%)	12(30%)	4(10%)	2(5%)	40(100%)

The selected group was composed of mature and energetic staff who still had many years in the health delivery system. This also implies that they had many roles and responsibilities. The effect of PTSD to this group revealed negative impacts to the well-being of the nurses and the health delivery system. The health delivery system suffers a lot if PTSD is not addressed.

Nature and context of problems affecting nurses over PSTD due to the COVID-19 pandemic

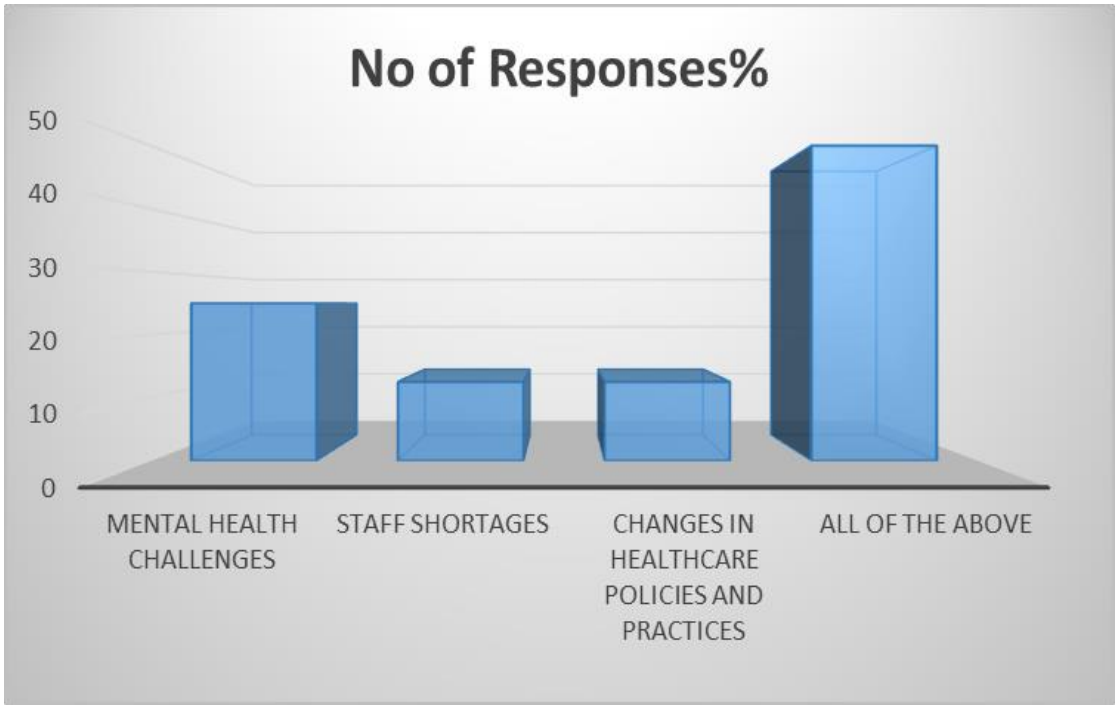

Figure 1: Nature and Context of the Problem

Nurses affected by PTSD due to COVID 19 pandemic

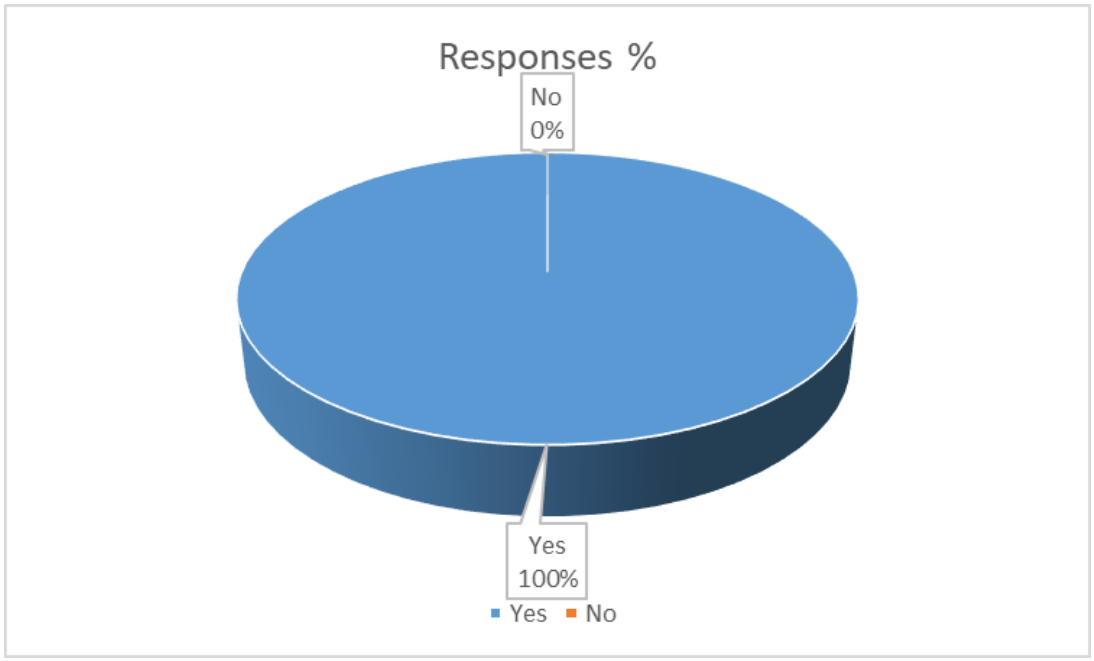

Figure 2: Nurses Suffering from PTSD

DISCUSSION

Factors affecting mental health of nurses during and after COVID-19

The research study found that nurses experienced PTSD as a result of having been exposed to patients. Due to the exposure to COVID-19 conditions, nurses were stigmatised both at work and in the community. The chances of infecting their family members were overwhelming for nurses in this study. This is in agreement with a study in Ghana that revealed that a substantial proportion of health workers faced stigma and discrimination related to COVID-19 (Ghana Health Service, 2021)). Stigmatisation of healthcare workers who are already vulnerable to infection due to increased exposure affect their concentration on work.

The investigation revealed a dearth of resources, such as personal protective equipment and counselling services, contributed to stress. This is in line with the findings of Harwood (2000) who found inadequate counselling strategies to be significantly associated with increased anxiety and depressive symptoms in healthcare professionals. A lack of counselling and personal protective equipment leads to compromised working conditions and increased exposure to infections. In addition, a lack of a proper sense of protection among health workers increase psychological distress and affect their mental well-being because a large proportion of COVID-19 cases are asymptomatic.

Nurses faced ethical dilemmas in their roles of caring for COVID-19 patients because of fear of contracting the virus. This is similar to a study by Yung (2020) that established that healthcare workers often have concerns about how to balance their ethical duty to provide care for patients against their fear of contracting the disease and transmitting it to their families. Nurses also struggle with balancing their own physical and mental health against the call of duty. They sometimes find themselves in situations where they might have to make an agonising decision of depriving ventilator support to critical patients who are unlikely to survive. They may allocate it to less critical patients with better chances of survival.

Stress among healthcare workers resulted from the employer's indifference. Many other essential drugs required to manage COVID-19, such as diazepam and morphine, and equipment such as pulse oximeters and syringe pumps, were in short supply (Kang, 2019). There are few other places that use concentrators instead of pipes for oxygen, which could lead to supply disruptions. The COVID-19 pandemic made the government of Zimbabwe realise how important it was to allocate resources to hospitals. The pandemic challenged the health delivery system to come up with multi-models to address the ever-changing health challenges that could

not be solved by the traditional linear model. The pandemic also called for counselling professionals to be accessible and visible in the health delivery system.

The study established that one of the causes of stress was emotional imbalance. The nurses were worried about spreading the disease. According to regional studies, many of them were isolated from their families for months because of fear of transmitting COVID-19. Loneliness was further exacerbated by working remotely and being shunned by community members. Fear of the unknown, becoming infected, and threats to their own mortality were some of the stressors that healthcare workers faced. This concurs with an Italian study by Rossi (2020) that being exposed to contagion was associated with symptoms of depression, while having a colleague hospitalised or placed in quarantine was associated with post-traumatic stress. Anxiety was a major concern, especially across most of the COVID-19 studies including this research. Anxiety refers to uncertainty regarding an upcoming event.

Effects of PTSD to nurses

The research study found that nurses were overwhelmed during the COVID-19 period, and they experienced compassion fatigue. This concurs with Figley (2022) who established that burnout and other forms of work-related psychological distress are unavoidable health concerns. People who work in the fields that deal with helping people who have been through traumatic events are likely to suffer from compassion fatigue.

The research study found out that nurses were affected by fear of contracting COVID-19. They felt insecure during the outbreak. The results concur with Nickel (2004) that, during the SARS outbreak, fear was primarily attributed to variables such as loss of control, concern for one's own health, and the spread of the virus. Clinical nurses are prone to psychological problems because of the many uncertainties. COVID-19 brought about many uncertainties even among nurses, and this left emotional scars including anger.

The study also established that nurses were depressed in the post-COVID-19 period as a result of having been exposed to traumatic working condition. Nurses are one of the largest occupational groups that are directly and intensively in constant contact with their patients. Another main reason for poor mental health in different studies was working in high-risk departments. The results of the study show that nurses suffered from mental health challenges in the post-COVID-19 period. Nursing is ranked 27th out of 130 jobs surveyed for mental health problems. According to survey, 7.4% of nurses were absent from work each week due

to burnout or disability due to stress, which is 80% higher than other occupational groups (Korea, 2019).

Intervention strategies

Researchers found that there are few specific intervention strategies to deal with PTSD among nurses after the COVID-19 pandemic. Although nurses were exposed to mental health issues, there had insignificant counselling support. Discrimination and stigma affect the levels of social support for healthcare professionals. The researchers discovered that effective strategies to manage stigma and discrimination are necessary in dealing with nurses PTSD. Their families and friends are worried about being affected, which results in relatively low social support. Steele (2020) stressed that, in order to effectively support nurses, the greatest assets of healthcare systems must understand their challenges and needs. The study established that occupational health issues, such as burnout and other forms of work-related psychological distress, are unavoidable. By acknowledging the commonality of psychological distress related to caring for patients with COVID-19, people can avoid stigmatisation of work-related mental health issues and appropriately attend to the mental health needs of all healthcare workers affected by the pandemic.

People who support those who are suffering, such as those who work in the healthcare professions, can become vulnerable to mental health issues if they are exposed to other people's trauma. Even when nurses want to empathise, they may find that they do not have the emotional or physical resources to do so. They may have feelings of helplessness and burnout due to the demands of supporting those who are suffering.

The research study found that working conditions were not favourable due to the shortage of staff and high volume of work. This concurs with Naser (2020) who established that hospital staff charged with admitting and caring for patients with COVID-19 were subjected to a variety of individual and organisational stresses that adversely affected their health and job satisfaction. Intervention strategies that reduce the workload would help nurses to deal with such stressors.

The study revealed that nurses were not aware of the stresses they were experiencing. Lack of awareness of stressors among nurses was found to be one of the obstacles in tackling post-traumatic stress disorder. Nurses were therefore not be able to connect their present experiences with the COVID-19 period. Counselling is important in such a situation.

Stress increases depression and anxiety, which can reduce job satisfaction, impair individual relationships, and even lead to suicidal thoughts. The diminution in concentration and decision-making abilities, as well as the mental health professional's poor capacity to communicate effectively with clients, can all contribute to lessening of psychological interventions. Stress management workshops on capacity building would help nurses deal with PTSD in the post-COVID-19 period.

PTSD affects nurses differently regardless of experience, and whether they have experienced similar conditions before. The treatment process is highly individual, and what works for one person may not work for another. At various stages in life, a person living with a chronic mental disorder may choose different options. The individual should work closely with a counsellor who can help them identify their needs and provide them with suitable treatment.

Counselling services were not provided to the nurses in Shurugwi during the pandemic. This is different from the assertion by Chimbwanda (2020) that, in Bulawayo, nurses were given new skills on management of stress, anxiety and depression during the COVID-19 pandemic. Health workers were trained to provide patients with psychosocial support and deal with issues of stress, discrimination, and fear in dealing with COVID-19. They learned how to handle bereavement issues and cope with the deaths of their co-workers and relatives, as well as how to spot signs of psycho-social or mental issues among their co-workers.

The investigation revealed that nurses were not educated regarding post-COVID-19 PTSD. Rummer (2020) suggests that there should be enhanced awareness among authorities or hospital administrators about their employees' mental health. During disease outbreaks healthcare workers need to be aware of the extent and sources of stress. Psychological well-being of healthcare workers should be promoted by hospital support systems and occupational health policy. Improving the understanding of employees' fears and the factors associated with those fears would be helpful to people involved in response planning for future outbreaks of infectious disease. Counselling is important for managing such situations, but it was not available for the sampled nurses in Shurugwi. This study established that the health delivery system in Shurugwi focused more on the patient and less on the nurse who is the care giver.

It is recommended that health professionals should be shielded from shaming and sexism. Sahebi (2020) acknowledges the importance of preventing nurses from being stigmatised, and policy makers should take steps to minimise this stress and allow them to focus on patient care.

An integrated administrative and psychosocial response to challenges that are caused by outbreaks could reduce stigma (Park, 2018). Education and advocacy for more respect for human rights and less stigma are ways to raise awareness about mental disorders.

In critical situations where face to face contact increases the risk of infection transmission, information technology and online services have been widely adopted. In the SARS-CoV-2 pandemic, most supportive, educational, and psychological interventions were performed using internet and online tools. Telemedicine is also feasible in this scenario. It is possible to reduce unnecessary visits, decrease the risk of healthcare workers infection, reduce healthcare workers workload, and optimise their time to care for patients with acute conditions using such technology. The technology could be videoconferencing platforms such as Zoom, which can be utilised to counsel, educate, and control disease transmission. Hotlines, online platforms and mobile devices could also be used for counselling.

Health (mumble health) is one of the practical tools that can be used to lessen the workload of health professionals. This technology is used for notifications and reminders of the time of care, online mental health education, online psychological counselling services, and online psychological self-help intervention system (Gupta, 2020). In these circumstances, artificial intelligence technology can be applied. It is possible to use this technology to recognise people and medical staff in danger of suicide. Tree Holes Rescue is an AI programme that assesses psychological messages in spaces such as Tree Holes and can calculate the possibility of suicide in people. Psychological interventions of healthcare workers can be provided by these technologies.

This study established that there were no counselling services for nurses to deal with PTSD in the post-COVID-19 period. Bandura (2001) posits that, among the mechanisms of human agency, none is more central than people's beliefs in their efficacy to manage their own functioning and to exercise control over events that affect their lives. Self-efficacy plays a key role in stress reactions and quality of coping in threatening situations. Counselling helps to empower clients mobilise resources within themselves and those that are in the environment.

Conclusion

This study established the following conclusions:

i) Dealing with post-traumatic stress disorder (PTSD) was found to be challenging for nurses who have been on the front lines during the COVID-19 pandemic.
ii) COVID-19 left emotional scars among nurses. Lack of adequate PPEs and essential drugs caused PTSD among nurses. They felt bad as they witnessed patients suffering without getting medication. The care they should have provided was affected by lack of PPEs.
iii) Stigma affected nurses during the pandemic leading to isolation. Nurses were also afraid of infecting their family members resulting in isolation.
iv) Some nurses did not receive allowance for having been infected by COVID-19 as per the employer's promise. Failing to honour the promise by the employer was a source of PTSD.
v) The participants were depressed, distressed and exhausted by COVID-19. The quality of life of nurses was affected by PTSD, even though some participants could not figure out what they were going through.
vi) There were no counselling services to address PTSD post-COVID-19 period among the nurses in Shurugwi. Counselling services were reserved for patients only.

Recommendations

Based on the findings, this study proffers the following recommendations:

i) Self-care: HPs ought to prioritise their own well-being by practising self-care. They ought to engage in activities that help them to relax, such as exercise, meditation, or hobbies. They also must take breaks when needed and ensure that they get enough rest.
ii) For those HPs who are affected by mental health issues, their family members ought to seek support: They ought to reach out to colleagues, friends, or support groups who can understand and empathise with such experiences. Sharing of feelings and concerns could help reduce the emotional burden.
iii) There is a need to seek professional support: HPs should consider seeking professional help through counselling or therapy. A mental health professional with experience in trauma could guide individuals through the process of healing and provide strategies to cope with PTSD symptoms.

iv) There is also a need to normalise one's emotions: HPs ought to recognise that it is normal to experience a range of emotions after a traumatic event. They must allow themselves to grieve, express feelings, and process what they have been through.

v) HPs must put effort to limit exposure to triggers: They ought to minimise exposure to reminders or triggers that could worsen the symptoms. This may involve taking breaks from work-related discussions that may be distressing.

vi) There is a need to educate oneself: HPs ought to learn more about PTSD and its symptoms, as well as coping mechanisms and treatment options. Understanding the condition can empower an individual to seek appropriate support and make informed decisions about mental health.

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