Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

RESILIENCE AND HARDINESS: A PROPOSED CONCEPTUAL MODEL FOR HEALTHCARE WORKERS

Nadzrah Yusof[1]
Salmi Mohd Isa[2]
Goh Yen Nee[3]

[1]Graduate School of Business, Universiti Sains Malaysia (USM), Malaysia (E-mail: nadzrahy@gmail.com)
[2]Graduate School of Business, Universiti Sains Malaysia (USM), Malaysia (E-mail: salmi.mohd.isa@usm.my)
[3]Graduate School of Business, Universiti Sains Malaysia (USM), Malaysia (E-mail: yngoh@usm.my)

Article history
Received date : 16-11-2020
Revised date : 9-5-2022
Accepted date : 3-6-2022
Published date : 30-9-2022

To cite this document:
Yusof, N., Isa, S. M. & Nee, G. Y. (2022). Resilience and Hardiness: A Proposed Conceptual Model for Healthcare Workers. *Journal of Islamic, Social, Economics and Development (JISED)*, 7(47), 377 - 396.

Abstract: *As the healthcare industry continues to evolve, it is critical that the healthcare workforce in the public hospitals equipped themselves with the necessary skills and resources to deliver effective and efficient care to the stakeholders. This can be done through the development on the job training and continuous resilience coaching for healthcare workers. This paper aims to discuss the various constructs of resilience and hardiness that are used in the development of resilience coaching for healthcare workers. The paper draws on the various literature sources to create a conceptual model for coaching resilience and hardiness among healthcare workers. Healthcare organizations should encourage resilience and hardiness among healthcare workers through various interventions in order to improve their coping techniques and overall well-being. According to the conceptual model that was presented, healthcare organisations should train their staff members to be more resilient and instil a sense of hardiness in them in order to improve the level of patient safety and better deal with the requirements of their profession.*

Keywords: *Resilience; Hardiness; Healthcare Workers; Education, Training, Coaching*

Introduction

Every day, healthcare workers encounter situations that demand resilience and hardiness if they are to provide the best care for patients. To meet the challenges of providing patient care in the twenty-first century, the healthcare professionals must develop professional and personal qualities of resilience and hardiness. Thus, to achieve this, education and resilience and hardiness coaching is the logical place to start. The provision of medical care is the end result of the coordinated efforts of a convoluted and malleable network of individuals, organisations, and processes (Clarkson et al., 2018). The health industry is not only a significant economic sector but also a significant employment sector, with significant job-creation potential (Health Services Sector, 2022). The aims are clear—to develop the health workforce that society requires to enhance health outcomes—knowledge, skills, population demographics, and social contracts are all changing at the same time (Hays et al., 2020). Healthcare workers obtain understanding of the profession through education and on the job training (Cheong & Hsu,

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

2021). Physicians, nurses and other health professionals are required to maintain and improve their knowledge and skills throughout the course of their careers in order to keep up with the quickly evolving state of health information and technology (Health Management, 2022). That is the one and only way to guarantee that their patients will receive healthcare that is only efficient but also safe. Simultaneously, they should be able to supplement that information with self-reflective construction of their own personal experiences (Christ, 2021). In achieving quality patient care, it is imperative to focus on the wellbeing of the mental health of healthcare providers as this has a direct impact on their capacity to give optimal care to patients. Moreover, provider burnout impacts other members of the health care workforce; "physician and staff dissatisfaction feed on each other"(Bodenheimer & Sinsky, 2014). Workplace adversity is gaining more attention in the international healthcare literature due to the Covid-19 pandemic outbreak. This article then discusses the evolution of resilience and hardiness in the context of healthcare and the implications of current understanding for future research in the context of all healthcare workers in the complex and ever-changing healthcare organization system.

Literature Review

The roots of the construct of resilience are in 2 bodies of literature: the psychological aspects of coping and the physiological aspects of stress. Fields of study related to psychology and physiology are simultaneously pushed apart by academic politics and drawn together by common elements of the human experience. This review of the literature will include some of the literature that led to the evolution of the construct of resilience (Tusaie & Dyer, 2004). From the psychological literature on stress and coping, observations of individuals coping better than expected and actually improving as a result of adversity laid the groundwork for the construct of resilience. Although the construct uses a holistic, multilevel approach similar to psycho neuro immunology, resilience focuses upon positive outcomes, not illness. Thus, both constructs are related but have a different emphasis (Lian & Tam, 2014).

Sources of Resilience

Personal Factors

Personality traits (openness, extraversion, and agreeableness), internal locus of control, mastery, self-efficacy, self-esteem, cognitive appraisal (positive interpretation of events and cohesive integration of adversity into self-narrative), and optimism all evidently contribute to resilience. The findings of pioneering investigators indicate that intellectual functioning, cognitive flexibility, social attachment, positive self-concepts, emotional regulation, positive emotions, spirituality, active coping, hardiness, optimism, hope, resourcefulness, and adaptability are associated with resilience(Joseph & Linley, 2006). Demographic factors (age, sex, gender, race, and ethnicity), social relationships, and population characteristics relate variably with resilience, depending on study methods and resilience definition. Some factors that increase resilience may be life stage–specific and others may operate across the lifespan (Herrman et al., 2011).

Biological Factors

Findings from a recent explosion of research in biological and genetic factors in resilience by (Luthar & Brown, 2007) indicate that harsh early environments can affect developing brain structure, function and neurobiological systems(Cicchetti & Curtis, 2015). Changes may occur in brain size, neural networks, the sensitivity of receptors, and the synthesis and reuptake of neurotransmitters (Curtis & Nelson, 2003). These physical changes in the brain can substantially exacerbate or reduce vulnerability to future psychopathology (Cicchetti & Curtis,

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

2015). Brain changes and other biological processes can affect the capacity to moderate negative emotions, and thereby affect resilience to adversities. Herrman et al., (2011) reported that an EEG study20 in maltreated and non-maltreated children aged 6 to 12 years found significant interaction in patterns of EEG activity between resilience, maltreatment status, and gender. Powerful evidence exists that supportive, sensitive early caregivers in infancy and childhood can increase resilience and reduce the effects of so-called toxic environments and that there may be sensitive periods when interventions work best (Gunnar et al., 2006). An elegant model in rats found that maternal care of rat pups, such as increased licking, reduces the HPA response to stress (Meaney, 2001). In humans, oxytocin suppresses the HPA axis and may contribute to positive social interaction by reducing stress and anxiety and thereby increasing interpersonal trust (The National Scientific Council on the Developing Child, 2012). Exposure to stressful events in childhood and adolescence is consistently shown to produce long-lasting alterations in the HPA axis, which may increase vulnerability to mood and anxiety disorders (Gladstone et al., 2004).

Environmental-Systemic Factors

On a micro-environmental level, social support, including relationships with family and peers, is correlated with resilience. Secure attachment to mother, family stability, secure relationship with a non-abusive parent, good parenting skills, and absence of maternal depression or substance abuse are associated with fewer behavioural problems and better psychological well-being in maltreated children. Social support can come from positive peers, supportive teachers, and other adults as well as immediate family. On a macrosystemic level, community factors, such as good schools, community services, sports and artistic opportunities, cultural factors, spirituality and religion, and lack of exposure to violence, contribute to resilience. Despite these findings, good social policy has been underused to enhance resilience in populations (Luthar & Cicchetti, 2000).

Resilience and Related Concepts

The terms "resilience" and "hardiness," "mental toughness," "engagement," and "grit" have been used interchangeably (Maddi, 2005). Resilience and hardiness, mental toughness, and grit were found to be highly associated ($r = 0.62$ to $r = 0.78$) in a study examining construct redundancy (Price, 2019). However, Price (2019) also showed through component analysis that these constructs are separate and that each of these dimensions contributed differently to stress and wellbeing. Thus, the similarities and differences between the constructs are examined in the following paragraphs.

Hardiness

Hardiness is the concept that is most closely related to resilience. It is characterised by commitment (seeking a meaningful objective), control (having faith in one's ability to overcome difficulties), and challenge (expecting that change will serve as a catalyst for improvement) (Mund, 2017). Kobasa (1979) studied workers in the management line as part of her initial research on hardiness. She found that those with the "hardy personality" were able to weigh the long-term repercussions of their life events (meaningfulness against nihilism) and approach them with a purpose (commitment versus alienation). Instead of being vegetative, they had a higher sense of connection to their environment and were driven by an internal locus of control as opposed to an external one (Kobasa, 1979). People who are "hardy" perceive life's events as less dangerous and more capable of handling them, which decreases the feeling of sadness (Bonanno, 2004). Hardiness has been suggested as one of the strategies to improve resilience

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

when enduring ongoing adversities, despite the fact that the areas of resilience and hardiness appear to overlap (Maddi, 2006).

Mental Toughness

In highly competitive fields where success depends on performance, such as athletics, business, and the military, mental toughness is frequently examined. The majority of studies were done with athletes in mind (Gucciardi et al., 2015). Mental toughness has been cited as a crucial psychological asset that predicted academic and job success outside of sports contexts (Lin et al., 2017). Mental toughness was found to be inversely connected with stress, burnout, and depression in a study of college students (Haghighi & Gerber, 2019). Like other concepts, mental toughness lacks a single defining paradigm (Price,2019). It is acknowledged as a multifaceted construct of confidence, control, challenge, and dedication (Lin et al., 2017). The definition of mental toughness as "having a natural or developed psychological edge that allows one to cope better than his or her opponents alongside the demands (such as competition and training), more consistently and better than other opponents, determined, focused, confident, and in control under pressure" was supported by a qualitative study (G. Jones et al., 2007). Mental toughness is frequently associated with unwavering self-belief, resilience, perseverance, attention, and efficient coping, according to a systematic assessment of quantitative and qualitative studies on the topic. However, mental toughness is more concerned with thriving and superior functioning in the face of adversity than is resilience, which concentrated on positive adaptation or reintegration amid adversity (Gucciardi et al., 2015; Liew et al., 2019).

Engagement

One of the elements of good organisational behaviour (POB) is work engagement. In order to improve work performance, POB focuses on human resource strengths and psychological aptitudes that are quantifiable, manageable, and adaptable (Hecht & Allen, 2009). "A good, rewarding, work-related frame of mind, characterised by vigour, dedication, and immersion" is the definition of engagement (Bakker & Demerouti, 2008). It is seen as a positive antithesis of burnout (exhaustion, depersonalization, and decreased accomplishment) and is characterised by great energy, intense involvement at work, and a sense of efficacy (Maslach & Leiter, 2016). Resilience was suggested as a prerequisite for job engagement by (Bakker & Demerouti, 2008). Along with other personal resources (such as optimism and self-efficacy) and job resources (such as supervision and autonomy), resilience predicts work engagement. A research of Czech assisting professionals found that engagement was a significant mediator between resilience and job performance and that resilience was a strong predictor of engagement (Kašpárková et al., 2018).

Grit

"Passion for and perseverance toward especially long-run goals" is one definition of the trait known as "grit" (Duckworth & Gross, 2014). Perseverance and maintaining one's enthusiasm throughout time are the two primary components that make up this operationalized model of the concept (Price, 2019). "Working hard towards a higher-order goal over an exceptionally extended period of time" is another definition of this concept (Underdahl et al., 2018). In recent years, researchers have looked at grit in a variety of settings, including military cadets, salespeople, and teachers (Hoffman, 2017), and the outcomes that have been tested most frequently are retention and intention to stay (Underdahl et al., 2018). A review suggests that the phrases "grit" and "resilience" are more complicated and involve more nuances (Stoffel & Cain, 2018). Markers of success are more closely connected with grit, whereas indicators of well-being are more closely associated with resilience (Price, 2019, Shakir et al., 2020; Stoffel

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

& Cain, 2018). According to the findings of one study conducted on adults, grit was responsible for an average of 4% of the variation in successful outcomes (61). Alongside a strong love for something, it has been suggested that resilience is an essential component of grit. Grit and resilience were found to have a substantial correlation in a study that was conducted with neurosurgeons (Shakir et al., 2020).

Hardiness in the Context of Healthcare Workers

Hardiness emerged as one of the individual characteristics associated with resilience as one of the traits that can preserve one against the negative consequences of adverse life experiences(Vagni, Maiorano, et al., 2020b). Kobasa (1979) is credited with being the first person to develop the concept of hardiness. It is a type of personality trait that has been defined as featuring three closely related tendencies: challenge, commitment, and control. It originates from an existential theory of personality (Maddi, 2004; Maddi et al., 2011), and its definition has been given. A perspective on life that enables an individual to perceive change as an opportunity for growth rather than a threat to one's sense of security or survival is referred to as having a "challenge" outlook on life. The term "challenge" reflects this perspective. Alteration, not maintenance of the status quo, is regarded as the standard way of living. People who have a lot of "commitment" have a strong belief in the validity of who they are and the significance of what they are doing. The research conducted by Bartone (2009) demonstrated that there was a connection between tenacity and pressure. Studies have shown that health workers with higher levels of hardiness enjoy better psychological well-being, and studies (Rerke et al., 2021; Maiorano et al., 2020; Vagni et al., 2020) have shown that hardiness has an inverse correlation with stress in both physicians and nurses. A study that was carried out on ambulance emergency workers revealed that workers with high levels of hardiness have lower levels of burnout, post-traumatic stress disorder, and psychopathology in general (Vagni, Giostra, et al., 2020).

According to Kobasa, (1979), some people are better able to withstand the effects of stress and find healthy ways to cope with it than others. In addition, they contend that those who possess positive personality traits such as toughness are better able to withstand the adverse impacts of stress. In addition, the individual is able to establish goals, make commitments, deal with adversity and pain, and recover from traumatic experiences and stress when they possess this trait of hardiness (Vagni, Maiorano, et al., 2020b). Hardiness as a personality trait has been recognised as a persuasive buffer in the association between stress and sickness over the previous two decades. Hardiness, according to the theory, is beneficial to both one's health and their work performance because of its influence on the coping process (Maddi et al., 2011). On the other side, personalities that are less resilient tend to engage in regressive methods more frequently (Jamal & Farooqi, 2016).

Interventions to Build Resilience and Hardiness

Both lowering the amount of work that has to be done and improving the amount of support offered at work are two ways that occupational stress can be mitigated (Demerouti et al., 2001). Interventions that target the former are a type of "organization-directed" intervention since they try to modify workplace characteristics that induce stress. These types of stress-reduction interventions have frequently been recommended as the most desirable type of intervention (Card, 2018). On the other hand, workplace support interventions try to improve staff wellbeing by providing stress management strategies like training, counselling, or assistance programmes in the workplace. Although this is the type of intervention that has received the most research for preventing burnout among healthcare professionals (De Simone et al., 2021), it has also been criticised for not addressing the true causes of stress, which can lead to burnout.

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

Although organization-directed initiatives that try to combat the causes of healthcare workers stress are unquestionably vital, the fact remains that healthcare jobs involve inherently difficult obstacles that cannot be eliminated completely. These include involvement in adverse events, which occur when a mistake in the delivery of patient care leads in the patient becoming injured. Even after twenty years of investment in the prevention of such incidents (Donaldson, 2008; Hendee, 2001; Panagioti et al., 2019), they continue to occur in ten percent of hospital admissions (Vincent et al., 2001). As a result of the trauma that these events inflict on patients and the families of those patients, healthcare professionals frequently struggle with feelings of anxiety, depression, and even symptoms of post-traumatic stress (Sirriyeh et al., 2010). This is in addition to the harm and distress that these events inflict on the patients themselves. Other stressful occurrences that are inherent to working in healthcare include breaking bad news to patients (Johnson & Panagioti, 2018), dealing with unexpected patient deaths (Jackson et al., 2005), and providing care to patients who are upset or hostile (Kunzler et al., 2020). These occurrences, in addition to causing stress in and of themselves, intensify the continuous intrinsic demands of healthcare work, such as the administration of complicated patients (Cleary et al., 2018) and the emotional labour of caring (Riley & Weiss, 2016). Workplace support measures are absolutely necessary in the face of these stressful clinical occurrences and the demands placed on employees (Johnson et al., 2020).

There is currently no resilience intervention that has been tested that is centred specifically on the intrinsic demands of healthcare work, and only a small number of studies have evaluated any kind of resilience intervention in healthcare workers (Moorfield & Cope, 2020). Currently, there is no resilience intervention that is focused specifically on the intrinsic demands of healthcare work. In addition, the ones that have been done have typically concentrated on certain professional groups associated with a single discipline (Foster et al., 2018; Henshall et al., 2020; Slatyer et al., 2018). Peer support programmes have made some progress toward their goal of providing a channel for support after an adverse event has taken place (Kunzler et al., 2020; Seys et al., 2013), but the problem of preparedness has been neglected, which is a critical oversight. Thus by taking a preventative strategy, with the goal of mentally preparing healthcare workers before these events occur, in order to lessen the detrimental impact that these occurrences have (Kunzler et al., 2020).

A Proposed Conceptual Model

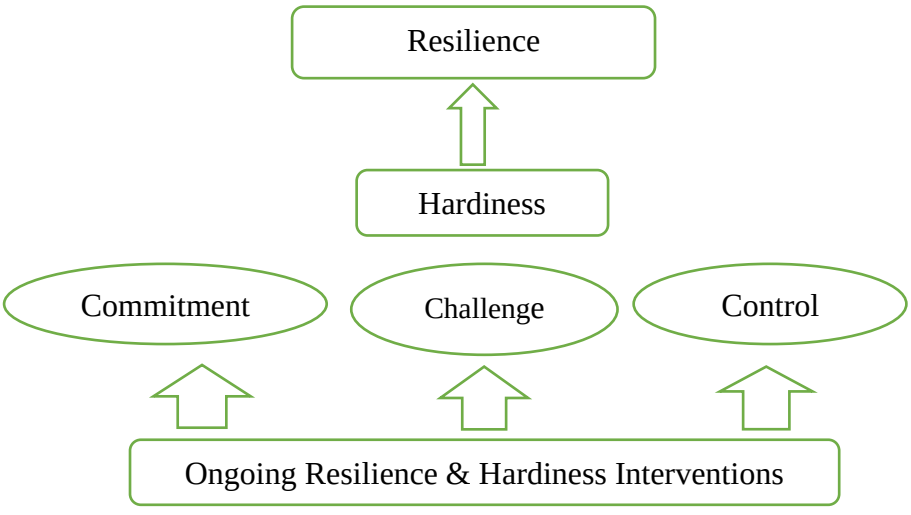


Figure 1: Conceptual model

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

The conceptual model that was produced as a result of an in-depth review of the relevant literature may be seen in Figure 2, which illustrates the model. This approach is designed to be utilised in the training of healthcare professionals in the areas of resiliency and toughness. The paradigm is made up of four basic concepts: resiliency, hardiness, coping skills, and interventions for resilience and hardiness. Healthcare management has the ability to increase the resiliency and toughness of healthcare workers by implementing interventions with the following goals: promoting independence; cultivating strong relationships; facilitating creativity and critical thinking; engendering optimism; demanding competence and independence; and demanding independence and competence. The ability of healthcare workers to bounce back from adversity and remain calm under pressure will improve along with their resiliency and toughness, which will ultimately result in an enhanced sense of well-being for these individuals. It is vital to emphasise that these skills will be applicable both inside and outside of the working environment, which will result in healthcare personnel having a better work-life balance. Workers in the healthcare industry who receive training in resiliency and toughness will be more effective in their jobs, better able to meet the challenges of their profession, and better prepared to advocate for the field.

Research Methodology

The articles for this literature review were found by searching the databases including Emerald Publishing (https://www.emerald.com/insight/), Science Direct (https://www.sciencedirect.com/), Google Scholar (https://scholar.google.com/), The Lancet (https://www.thelancet.com/) Sage Publications (http://www.sagepub.com/home.nav) and Taylor & Francis (http://www.tandfonline.com/). The search terms included combinations of the following keywords: *training, coaching, coping, self-care, well-functioning, hardiness, resilience, health professional/worker/practitioner, nurses, doctors.* The search was limited to English-language peer-reviewed journals and dissertations published. The initial search identified 142 articles in total. The following criteria were applied:

1. An article was *included* if it had a focus on training, coaching, coping, self-care, well-functioning, hardiness or resilience of health professionals; and healthcare students.
2. An article was *excluded* if samples or discussions were only concerned with patients or pupils, and/or were only marginally generalizable to a certain health profession.
3. An article was *excluded* if its findings or analysis gave scant attention to coping mechanisms, self-care, functioning normally, wellbeing, toughness, or resilience.

The criteria imposed on the search process resulted in 35 articles being found for inclusion. A total of 33% of the articles were related to resilience and hardiness among nurses and physicians, while the remainder were linked to resilience and hardiness in general. Most of the selected articles focused on healthcare workers issues in America and European countries, while a small number of articles touched on resilience and hardiness of healthcare workers in other Asian and Australia. A total of 16 articles were identified as the main references in developing the importance of training and coaching of resiliency and hardiness among healthcare workers, while the remaining articles provide supportive information for the present article (Appendix). Santarone et al., (2020) also reported that, in addition, healthcare workers must continue to successfully treat non-COVID patients and fulfil their other obligations, such as caring for their families and themselves. Research continues to indicate significant rates of burnout, mental stress, and suicide among healthcare workers, raising awareness of their psychological load and general wellbeing (Penwell-Waines et al., 2018). Prior to COVID-19, extensive research had shown the multifaceted nature of pressures in healthcare, including responsibilities related to electronic health records, billing and insurance concerns, patient

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

discontent, and juggling hectic work and personal schedules (Nanda et al., 2017). Healthcare workers are required to maintain a balance between these pre-existing impediments to wellness and the particular difficulties posed by a pandemic (Shreffler et al., 2020).

Conclusion and Future Directions

In times of crisis, such as the COVID-19 pandemic, it is essential to provide psychological support, training, and supervision to medical professionals. Additionally, it is important to assist these individuals in contemplating how to respond emotionally and psychologically to a catastrophic event (Billings et al., 2021; Coco et al., 2021). In addition, it is necessary to aid these persons in thinking about how to respond emotionally and mentally to a crisis. In addition, healthcare organisations should equip their staff members with information on how to manage stress, decrease the risk of burnout, and build their resilience in the face of a crisis of this magnitude (Coco et al., 2021). Additionally, resiliency can be achieved through the training of one's mental health, which can increase one's sense of self-confidence and self-efficacy (Roslan et al., 2022). Furthermore, according to Rosen et al., (2018), there is a necessity to encourage those who work in the healthcare industry to strengthen both their emotional and cognitive capabilities. The health of the individual health care worker as well as the health of the company that provides health care benefits when personnel are taught to be resilient (Labrague, 2021). There is a wide range of benefits, including increased productivity, healthier personnel, increased job satisfaction, enhanced patient care, reduced employee turnover, and a safer working environment (Kunzler et al., 2020). Employees that are resilient are able to tolerate the stressors of their jobs, such as job strain or work-related worry, and have some degree of protection against the impacts of burnout, compassion fatigue, and secondary traumatic stress (Di Trani et al., 2021). When working in the healthcare industry, employees need to be able to maintain their resilience and toughness in the face of professional obstacles such as change and hardship so that they can continue to meet new challenges as they arise (Kunzler et al., 2020; Robertson et al., 2016). This article proposed the importance of coping interventions to encourage the development of resilience and hardiness in healthcare workers to produce a health workforce with higher levels of improved coping skills and overall health and well-being. Therefore, hospital administrations and the Ministry of Health should provide additional resources to make it possible for interventions in providing training in resilience and hardiness among healthcare workers in order for them to become more engaged in their work. This will allow the healthcare workers to better serve their patients in future.

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

Appendix: Articles Selected in Formulating the Conceptual Model of Resilience and Hardiness

Title of Articles	Authors	Resilience and Hardiness Strategy
Evolution of Resilience Constructs, Its Distinction with Hardiness, Mental Toughness, Work Engagement and Grit, and Implications to Future Healthcare Research	Roslan, NS., Yusoff, MSB., Morgan, K., Ab Razak, A., Ahmad Shauki, NI. (2022)	Interventions to Increase Physicians' Resilience through the Accreditation Council for Graduate Medical Education's Common Programme Requirements for Residency and Fellowship Programmes have pioneered a new approach.
Resilience, Coping Strategies and Posttraumatic Growth in the Workplace Following COVID-19: A Narrative Review on the Positive Aspects of Trauma	Finstad, G.L.; Giorgi, G.; Lulli, L.G.; Pandolfi, C.; Foti, G.; León-Perez, J.M.; Cantero-Sánchez, F.J.; Mucci, N. (2021)	In order to create positive cycles among healthcare employees, organisations should incorporate interventions to promote resilience, post-traumatic growth, and adaptive coping through counselling services, social connection initiatives, and targeted training.
The Job Performance of Emergency Nurses and its Relationship with Spiritual Intelligence and Occupational Hardiness	Dehghani, F., Foroughian Yazdi, F., Askari, R. (2019)	In order to improve their effectiveness on the job, pre-hospital and hospital emergency nurses may benefit from developing their spiritual intelligence as well as their professional hardiness.
Interventions to support the resilience and mental health of frontline health and social care professionals during and after a disease outbreak, epidemic or pandemic: a mixed methods systematic review	Pollock, A., Campbell, P., Cheyne, J., Cowie, .J, Davis, B., McCallum, J., McGill, K., Elders, A., Hagen, S., McClurg, D., Torrens, C., Maxwell, M. (2020)	A lack of awareness on the part of frontline workers or the organisations for which they worked regarding what was required to assist their mental health, as well as a deficiency of equipment, staff time, or skills necessary for an intervention. Three elements facilitated the implementation of interventions: interventions that were adaptable to local needs; formal and informal communication; and good, safe, and supportive learning settings for frontline workers. People's knowledge, beliefs, or both might operate as either barriers or facilitators to the implementation of an intervention, depending on the context.
The impact of leadership coaching in an Australian healthcare setting	Grant, A.M., Studholme, I., Verma, R., Kirkwood, L., Paton, B., O'Connor, S. (2017)	Leadership coaching may prove to be an important approach for supporting goal accomplishment and fostering resilience in this vital social sector, which would be to the benefit of people who work in the health services, their families, and eventually their patients as well as the larger community.
The effectiveness of interventions to improve resilience among health professionals: A systematic review	Cleary, M., Kornhaber, R., Thapa, D. K., West, S., Visentin, D. (2018)	Training interventions may help health professionals improve their resilience. Interventions to promote resilience in health professionals necessitate a substantial time investment. When designing resilience interventions, it may be necessary to adapt programmes to the local context and schedule.

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

		To improve resilience among health professionals, a long-term and sustained effort to support ongoing practise is required.
Personal and work-related factors associated with nurse resilience: A systematic review	Yu, F., Raphael, D., Mackay, L., Smith, M., King, A. (2019)	When confronted with challenges in the workplace, increased nurse resilience can assist in mitigating the effects of emotional tiredness, boosting work engagement, and improving overall function. This can be helpful for nurses in developing techniques to cope with challenging situations and lessen the impact of the demands of their jobs.
Resilience as a strategy for struggling against challenges related to the nursing profession	Yılmaz, E. B. (2017)	Resilience can be taught and improved through the use of examples from various applications. Mentorship programmes are suggested in this regard to improve resilience. Mentorship programmes may promote resilience by fostering positive and supportive professional relationships, as well as by encouraging optimism, emotional insight, life balance, and spirituality.
Providers' perspectives on implementing resilience coaching for healthcare workers during the COVID-19 pandemic	Rosen, B., Presiman, M., Read, H., Chaukos, D., Greenberg, R.A., Zetts, L., Maunder, R., Wiesenfeld, L. (2022)	Opportunities to support colleagues and make a contribution to the broader reaction of the health system to COVID-19 acted as a driving force for coaches. Finding time within busy work schedules was one of the challenges, as was reconciling role conflicts and working while experiencing burnout.
Enhancing hardiness among health-care workers: the perceptions of senior managers	Hague, A., Leggat, S.G. (2010)	Hardiness can be taught by healthcare organisations, and hardy workers can be selected for employment. Additionally, health care companies can establish techniques to aid employees in increasing their levels of hardiness in the workplace.
Hardiness in the structure of personal resources conducive to overcoming professional burnout among workers during a pandemic.	I. Rerke, V., V. Belyakova, N., B. Mottaeva, A., P. Shipovskaya, L., V. Ignatyeva, A.., V. Blinov, L.., & G. Kalina,. I. (2021)	A high level of hardiness in the structure of one's personal resources can be a factor in avoiding or recovering from professional burnout.
Gain cycles in healthcare workers: the role of job resources and hardy personality	Guglielmi, D., Gallì, L., Simbula, S., Mazzetti, G. (2019)	Over time, both learning opportunities and a tough personality are positively related to work engagement. Work engagement is thus related to a tough personality and job resources over time. These findings contribute to a better understanding of additional strategies for increasing resources and increasing work engagement, particularly in healthcare settings.

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

Personal Accomplishment and Hardiness in Reducing Emergency Stress and Burnout among COVID-19 Emergency Workers	Vagni, M., Giostra, V., Maiorano, T., Santaniello, G., Pajardi, D. (2020)	Hardiness was shown to have an influence on lowering levels of emergency stress, emotional tiredness, and depersonalization, all while concurrently raising levels of personal accomplishment.
Hardiness and Burnout Syndrome: A Cross-Cultural Study among Portuguese and Brazilian Nurses	Carlotto, M. S., Queirós, C., Dias, S., Kaiseler, M. (2014)	Hardiness is a personality attribute that helps to explain burnout by providing distinct predictive models for each sample. The discrepancies between the samples were explained by the overall job characteristics and work contexts of Portuguese and Brazilian nurses. Future interventions aimed at reducing burnout among Portuguese and Brazilian nurses should consider several toughness characteristics.
Hardiness and Coping as Predictors of Professional Life Stress among House-job Doctors	Jamal, Y., Farooqi, Y.N. (2015)	House-job doctors would be able to overcome professional life stress if they received training to increase their hardiness level and used a problem-focused coping strategy.
Can we prepare healthcare professionals and students for involvement in stressful healthcare events? A mixed-methods evaluation of a resilience training intervention	Johnson, J., Simms-Ellis, R., Janes, G., Mills, T., Budworth, L., Atkinson, L., Harrison, R. (2020)	Tailored interventions are widely accepted, and it is possible to develop a single intervention that can be easily adapted to improve resilience in a variety of healthcare disciplines.
Improving Healthcare Worker Resilience and Well-Being During COVID-19 Using a Self-Directed E-Learning Intervention		The findings highlighted the importance of e-learning programmes for health systems and organisations interested in improving healthcare workers well-being and resilience as protective factors against burnout, particularly during crisis care.

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

References

Alameddine, M., Clinton, M., Bou-Karroum, K., Richa, N., & Doumit, M. A. A. (2021). Factors Associated With the Resilience of Nurses During the COVID-19 Pandemic. *Worldviews on Evidence-Based Nursing*. https://doi.org/10.1111/wvn.12544

Bagley, C., Abubaker, M., & Sawyerr, A. (2018). Personality, work-life balance, hardiness, and vocation: A typology of nurses and nursing values in a special sample of english hospital nurses. *Administrative Sciences*. https://doi.org/10.3390/admsci8040079

Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*. https://doi.org/10.1108/13620430810870476

Balme, E., Gerada, C., & Page, L. (2015). Doctors need to be supported, not trained in resilience. *BMJ*. https://doi.org/10.1136/bmj.h4709

Bartone T, P. (2009). Resilience Under Military Operational Stress: Can Leaders Influence Hardiness? *Military Psychology*.

Bartone, P. T. (1995). A Short Hardiness Scale. *American Psychological Society, New York, NY*.

Billings, J., Ching, B. C. F., Gkofa, V., Greene, T., & Bloomfield, M. (2021). Experiences of frontline healthcare workers and their views about support during COVID-19 and previous pandemics: a systematic review and qualitative meta-synthesis. *BMC Health Services Research*. https://doi.org/10.1186/s12913-021-06917-z

Block, J., & Kremen, A. M. (1996). IQ and Ego-Resiliency: Conceptual and Empirical Connections and Separateness. *Journal of Personality and Social Psychology*. https://doi.org/10.1037/0022-3514.70.2.349

Bodenheimer, T., & Sinsky, C. (2014). From triple to Quadruple Aim: Care of the patient requires care of the provider. *Annals of Family Medicine*. https://doi.org/10.1370/afm.1713

Bonanno, G. A. (2004a). Loss, Trauma, and Human Resilience: Have We Underestimated the Human Capacity to Thrive after Extremely Aversive Events? In *American Psychologist*, *59*(1), 20–28. https://doi.org/10.1037/0003-066X.59.1.20

Bonanno, G. A. (2004b). Loss, Trauma, and Human Resilience: Have We Underestimated the Human Capacity to Thrive after Extremely Aversive Events? In *American Psychologist*. https://doi.org/10.1037/0003-066X.59.1.20

Card, A. J. (2018). Physician burnout: Resilience training is only part of the solution. *Annals of Family Medicine*. https://doi.org/10.1370/afm.2223

Carver, C. S. (1998). Resilience and thriving: Issues, models, and linkages. *Journal of Social Issues*, *54*(2), 245–266. https://doi.org/10.1111/0022-4537.641998064

Chen, Y. C., Wu, H. C., Kuo, F. T., Koh, D., Guo, Y. L. L., & Shiao, J. S. C. (2022). Hospital factors that predict intention of health care workers to leave their job during the COVID-19 pandemic. *Journal of Nursing Scholarship*. https://doi.org/10.1111/jnu.12771

Cheong, P. L., & Hsu, N. (2021). Developing and evaluating a continuous education program for healthcare assistants in macao: A cluster-randomized trial. *International Journal of Environmental Research and Public Health*. https://doi.org/10.3390/ijerph18094990

Chmitorz, A., Kunzler, A., Helmreich, I., Tüscher, O., Kalisch, R., Kubiak, T., Wessa, M., & Lieb, K. (2018). Intervention studies to foster resilience – A systematic review and proposal for a resilience framework in future intervention studies. In *Clinical Psychology Review*. https://doi.org/10.1016/j.cpr.2017.11.002

Choi, B. S., Sun Kim, J., Lee, D. W., Paik, J. W., Chul Lee, B., Won Lee, J., Lee, H. S., & Lee, H. Y. (2018). Factors Associated with Emotional Exhaustion in South Korean Nurses: A Cross-Sectional Study. *Psychiatry Investigation*. https://doi.org/10.30773/pi.2017.12.31

Christ, G. (2021). Addressing the "public health crisis" of healthcare worker burnout. *Modern Healthcare*.

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

Cicchetti, D. (2010). Resilience under conditions of extreme stress: A multilevel perspective. In *World Psychiatry*. https://doi.org/10.1002/j.2051-5545.2010.tb00297.x

Cicchetti, D., & Curtis, W. J. (2015). The Developing Brain and Neural Plasticity: Implications for Normality, Psychopathology, and Resilience. In *Developmental Psychopathology: Second Edition*. https://doi.org/10.1002/9780470939390.ch1

Clarkson, J., Dean, J., Ward, J., Komashie, A., & Bashford, T. (2018). A systems approach to healthcare: from thinking to -practice. *Future Healthcare Journal*. https://doi.org/10.7861/futurehosp.5-3-151

Cleary, M., Kornhaber, R., Thapa, D. K., West, S., & Visentin, D. (2018). The effectiveness of interventions to improve resilience among health professionals: A systematic review. In *Nurse Education Today*. https://doi.org/10.1016/j.nedt.2018.10.002

Coco, M., Guerrera, C. S., Santisi, G., Riggio, F., Grasso, R., Di Corrado, D., Di Nuovo, S., & Ramaci, T. (2021). Psychosocial impact and role of resilience on healthcare workers during covid-19 pandemic. *Sustainability (Switzerland)*. https://doi.org/10.3390/su13137096

Connor, K. M., & Davidson, J. R. T. (2003). Development of a new Resilience scale: The Connor-Davidson Resilience scale (CD-RISC). *Depression and Anxiety*. https://doi.org/10.1002/da.10113

Curtis, W. J., & Nelson, C. A. (2003). Toward building a better brain: Neurobehavioral outcomes, mechanisms, and processes of environmental enrichment. In *Resilience and Vulnerability: Adaptation in the Context of Childhood Adversities*. https://doi.org/10.1017/CBO9780511615788.021

Daigneault, I., Hébert, M., & Tourigny, M. (2007). Personal and Interpersonal Characteristics Related to Resilient Developmental Pathways of Sexually Abused Adolescents. In *Child and Adolescent Psychiatric Clinics of North America*. https://doi.org/10.1016/j.chc.2006.11.002

De Simone, S., Vargas, M., & Servillo, G. (2021). Organizational strategies to reduce physician burnout: a systematic review and meta-analysis. In *Aging Clinical and Experimental Research*. https://doi.org/10.1007/s40520-019-01368-3

Demerouti, E., Nachreiner, F., Bakker, A. B., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*. https://doi.org/10.1037/0021-9010.86.3.499

Di Trani, M., Mariani, R., Ferri, R., De Berardinis, D., & Frigo, M. G. (2021). From Resilience to Burnout in Healthcare Workers During the COVID-19 Emergency: The Role of the Ability to Tolerate Uncertainty. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2021.646435

Donaldson, M. S. (2008). An Overview of To Err is Human: Re-emphasizing the Message of Patient Safety. In *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*.

Duckworth, A., & Gross, J. J. (2014). Self-Control and Grit: Related but Separable Determinants of Success. *Current Directions in Psychological Science*. https://doi.org/10.1177/0963721414541462

Edward, K. L., Welch, A., & Chater, K. (2009). The phenomenon of resilience as described by adults who have experienced mental illness. *Journal of Advanced Nursing*. https://doi.org/10.1111/j.1365-2648.2008.04912.x

Epstein, R. M., & Krasner, M. S. (2013). Physician resilience: What it means, why it matters, and how to promote it. In *Academic Medicine*. https://doi.org/10.1097/ACM.0b013e318280cff0

Finstad, G. L., Giorgi, G., Lulli, L. G., Pandolfi, C., Foti, G., León-Perez, J. M., Cantero-Sánchez, F. J., & Mucci, N. (2021). Resilience, coping strategies and posttraumatic growth in the workplace following covid-19: A narrative review on the positive aspects of trauma.

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

International Journal of Environmental Research and Public Health. https://doi.org/10.3390/ijerph18189453

Foster, K., Shochet, I., Wurfl, A., Roche, M., Maybery, D., Shakespeare-Finch, J., & Furness, T. (2018). On PAR: A feasibility study of the Promoting Adult Resilience programme with mental health nurses. *International Journal of Mental Health Nursing*. https://doi.org/10.1111/inm.12447

Friborg, O., Hjemdal, O., Rosenvinge, J. H., & Martinussen, M. (2003). A new rating scale for adult resilience: What are the central protective resources behind healthy adjustment? *International Journal of Methods in Psychiatric Research*. https://doi.org/10.1002/mpr.143

Friborg, O., Hjemdal, O., Rosenvinge, J. H., Martinussen, M., Aslaksen, P. M., & Flaten, M. A. (2006). Resilience as a moderator of pain and stress. *Journal of Psychosomatic Research*. https://doi.org/10.1016/j.jpsychores.2005.12.007

Gillespie, C. F., Phifer, J., Bradley, B., & Ressler, K. J. (2009). Risk and resilience: Genetic and environmental influences on development of the stress response. *Depression and Anxiety*. https://doi.org/10.1002/da.20605

Gladstone, G. L., Parker, G. B., Mitchell, P. B., Malhi, G. S., Wilhelm, K., & Austin, M. P. (2004). Implications of childhood trauma for depressed women: An analysis of pathways from childhood sexual abuse to deliberate self-harm and revictimization. *American Journal of Psychiatry*. https://doi.org/10.1176/appi.ajp.161.8.1417

Gucciardi, D. F., Hanton, S., Gordon, S., Mallett, C. J., & Temby, P. (2015). The Concept of Mental Toughness: Tests of Dimensionality, Nomological Network, and Traitness. *Journal of Personality*. https://doi.org/10.1111/jopy.12079

Gunnar, M. R., Fisher, P. A., Dozier, M., Fox, N., Levine, S., Neal, C., Pollak, S., Plotsky, P., Sanchez, M., & Vazquez, D. (2006). Bringing basic research on early experience and stress neurobiology to bear on preventive interventions for neglected and maltreated children. In *Development and Psychopathology*. https://doi.org/10.1017/S0954579406060330

Haghighi, M., & Gerber, M. (2019). Does mental toughness buffer the relationship between perceived stress, depression, burnout, anxiety, and sleep? *International Journal of Stress Management*. https://doi.org/10.1037/str0000106

Hague, A., & Leggat, S. G. (2010). Enhancing hardiness among health-care workers: The perceptions of senior managers. *Health Services Management Research*. https://doi.org/10.1258/hsmr.2009.009018

Hays, R. B., Ramani, S., & Hassell, A. (2020). Healthcare systems and the sciences of health professional education. *Advances in Health Sciences Education*. https://doi.org/10.1007/s10459-020-10010-1

Hecht, T. D., & Allen, N. J. (2009). Positive organisational behaviour: Engaged employees in flourishing organizations. *Journal of Organizational Behavior*.

Hendee, W. R. (2001). To Err is Human: Building a Safer Health System. *Journal of Vascular and Interventional Radiology*. https://doi.org/10.1016/s1051-0443(01)70072-3

Henshall, C., Davey, Z., & Jackson, D. (2020). The implementation and evaluation of a resilience enhancement programme for nurses working in the forensic setting. *International Journal of Mental Health Nursing*. https://doi.org/10.1111/inm.12689

Herrman, H., Stewart, D. E., Diaz-Granados, N., Berger, E. L., Jackson, B., & Yuen, T. (2011). What is resilience ? *Can J Psychiatry*.

Hjemdal, O., Aune, T., Reinfjell, T., Stiles, T. C., & Friborg, O. (2007). Resilience as a Predictor of Depressive Symptoms: A Correlational Study with Young Adolescents. *Clinical Child Psychology and Psychiatry*. https://doi.org/10.1177/1359104507071062

Hoffman, E. (2017). Grit: The Power of Passion and Perseverance. *Growth: The Journal of the*

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

Association for Christians in Student Development.

Hollnagel, E. (2017). Safety-II in practice: Developing the resilience potentials. In *Safety-II in Practice: Developing the Resilience Potentials*. https://doi.org/10.4324/9781315201023

Htay, M. N. N., Marzo, R. R., Bahari, R., AlRifai, A., Kamberi, F., El-Abasiri, R. A., Nyamache, J. M., Hlaing, H. A., Hassanein, M., Moe, S., Abas, A. L., & Su, T. T. (2021). How healthcare workers are coping with mental health challenges during COVID-19 pandemic? - A cross-sectional multi-countries study. *Clinical Epidemiology and Global Health*. https://doi.org/10.1016/j.cegh.2021.100759

I. Rerke, V., V. Belyakova, N., B. Mottaeva, A., P. Shipovskaya, L., V. Ignatyeva, A., V. Blinov, L., & G. Kalina, I. (2021). Hardiness In The Structure Of Personal Resources Conducive To Overcoming Professional Burnout Among Workers During A Pandemic. *Revista Gênero e Interdisciplinaridade*. https://doi.org/10.51249/gei.v2i01.142

Jackson, V. A., Sullivan, A. M., Gadmer, N. M., Seltzer, D., Mitchell, A. M., Lakoma, M. D., Arnold, R. M., & Block, S. D. (2005). "It was haunting...": Physicians' descriptions of emotionally powerful patient deaths. *Academic Medicine*. https://doi.org/10.1097/00001888-200507000-00007

Jeleff, M., Traugott, M., Jirovsky-Platter, E., Jordakieva, G., & Kutalek, R. (2022). Occupational challenges of healthcare workers during the COVID-19 pandemic: A qualitative study. *BMJ Open*. https://doi.org/10.1136/bmjopen-2021-054516

Johnson, J., & Panagioti, M. (2018). Interventions to improve the breaking of bad or difficult news by physicians, medical students, and interns/residents: A systematic review and meta-analysis. In *Academic Medicine*. https://doi.org/10.1097/ACM.0000000000002308

Johnson, J., Simms-Ellis, R., Janes, G., Mills, T., Budworth, L., Atkinson, L., & Harrison, R. (2020). Can we prepare healthcare professionals and students for involvement in stressful healthcare events? A mixed-methods evaluation of a resilience training intervention. *BMC Health Services Research*. https://doi.org/10.1186/s12913-020-05948-2

Jones, G., Hanton, S., & Connaughton, D. (2007). A framework of mental toughness in the world's best performers. *Sport Psychologist*. https://doi.org/10.1123/tsp.21.2.243

Jones, P. S. (1991). Adaptability: a personal resource for health. In *Scholarly inquiry for nursing practice*.

Joseph, S., & Linley, P. A. (2006). Growth following adversity: Theoretical perspectives and implications for clinical practice. *Clinical Psychology Review*. https://doi.org/10.1016/j.cpr.2005.12.006

Kašpárková, L., Vaculík, M., Procházka, J., & Schaufeli, W. B. (2018). Why resilient workers perform better: The roles of job satisfaction and work engagement. *Journal of Workplace Behavioral Health*. https://doi.org/10.1080/15555240.2018.1441719

Kelly, F., Uys, M., Bezuidenhout, D., Mullane, S. L., & Bristol, C. (2021). Improving Healthcare Worker Resilience and Well-Being During COVID-19 Using a Self-Directed E-Learning Intervention. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2021.748133

Kim, E. Y., & Chang, S. O. (2022). Exploring nurse perceptions and experiences of resilience: a meta-synthesis study. *BMC Nursing*. https://doi.org/10.1186/s12912-021-00803-z

Kobasa, S. C. (1979a). Personality and resistance to illness. *American Journal of Community Psychology*. https://doi.org/10.1007/BF00894383

Kobasa, S. C. (1979b). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of Personality and Social Psychology*. https://doi.org/10.1037/0022-3514.37.1.1

Kobasa, S. C. (1979c). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of Personality and Social Psychology*. https://doi.org/10.1037/0022-3514.37.1.1

Koinis, A., Giannou, V., Drantaki, V., Angelaina, S., Stratou, E., & Saridi, M. (2015). The

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

impact of healthcare workers job environment on their mental-emotional health. Coping strategies: the case of a local general hospital. *Health Psychology Research*. https://doi.org/10.4081/hpr.2015.1984

Kunzler, A. M., Helmreich, I., Chmitorz, A., König, J., Binder, H., Wessa, M., & Lieb, K. (2020). Psychological interventions to foster resilience in healthcare professionals. In *Cochrane Database of Systematic Reviews*. https://doi.org/10.1002/14651858.CD012527.pub2

Labrague, L. J. (2021). Psychological resilience, coping behaviours and social support among health care workers during the COVID-19 pandemic: A systematic review of quantitative studies. In *Journal of Nursing Management*. https://doi.org/10.1111/jonm.13336

Laureys, V., & Easton, M. (2020). Resilience of firefighters exposed to potentially traumatic events: a literature review. In *International Journal of Emergency Services*. https://doi.org/10.1108/IJES-05-2019-0021

Ledesma, J. (2014). Conceptual frameworks and research models on resilience in leadership. *SAGE Open*, *4*(3). https://doi.org/10.1177/2158244014545464

Li, Y., Cao, F., Cao, D., & Liu, J. (2015). Nursing students' post-traumatic growth, emotional intelligence and psychological resilience. *Journal of Psychiatric and Mental Health Nursing*. https://doi.org/10.1111/jpm.12192

Lian, S. Y., & Tam, C. L. (2014). Work stress, coping strategies and resilience: A study among working females. *Asian Social Science*, *10*(12), 41–52. https://doi.org/10.5539/ass.v10n12p41

Liew, G. C., Kuan, G., Chin, N. S., & Hashim, H. A. (2019). Mental toughness in sport: Systematic review and future. In *German Journal of Exercise and Sport Research*. https://doi.org/10.1007/s12662-019-00603-3

Liljestrand, R., & Martin, S. (2021). Stress and Resilience Among Healthcare Workers During the COVID-19 Pandemic: Consideration of Case Studies. *Rehabilitation Nursing : The Official Journal of the Association of Rehabilitation Nurses*. https://doi.org/10.1097/RNJ.0000000000000344

Lin, Y., Clough, P. J., Welch, J., & Papageorgiou, K. A. (2017). Individual differences in mental toughness associate with academic performance and income. *Personality and Individual Differences*. https://doi.org/10.1016/j.paid.2017.03.039

Luthar, S. S., & Brown, P. J. (2007). Maximizing resilience through diverse levels of inquiry: Prevailing paradigms, possibilities, and priorities for the future. *Development and Psychopathology*. https://doi.org/10.1017/S0954579407000454

Luthar, S. S., & Cicchetti, D. (2000). The construct of resilience: Implications for interventions and social policies. *Development and Psychopathology*. https://doi.org/10.1017/S0954579400004156

Maddi, S. R. (2004). Hardiness: An Operationalization of Existential Courage. *Journal of Humanistic Psychology*. https://doi.org/10.1177/0022167804266101

Maddi, S. R. (2005). On hardiness and other pathways to resilience. *American Psychologist*. https://doi.org/10.1037/0003-066X.60.3.261

Maddi, S. R. (2006). Hardiness: The courage to grow from stresses. *Journal of Positive Psychology*. https://doi.org/10.1080/17439760600619609

Maddi, S. R., Harvey, R. H., Khoshaba, D. M., Fazel, M., & Resurreccion, N. (2012). The relationship of hardiness and some other relevant variables to college performance. *Journal of Humanistic Psychology*. https://doi.org/10.1177/0022167811422497

Maddi, S. R., Khoshaba, D. M., Harvey, R. H., Fazel, M., & Resurreccion, N. (2011). The personality construct of hardiness, v: Relationships with the construction of existential meaning in life. *Journal of Humanistic Psychology*.

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

https://doi.org/10.1177/0022167810388941

Maiorano, T., Vagni, M., Giostra, V., & Pajardi, D. (2020). COVID-19: Risk factors and protective role of resilience and coping strategies for emergency stress and secondary trauma in medical staff and emergency workers—an online-based inquiry. *Sustainability (Switzerland)*. https://doi.org/10.3390/su12219004

Mandleco, B. L. (2007). An Organizational Framework for Conceptualizing Resilience in Children. *Journal of Child and Adolescent Psychiatric Nursing*. https://doi.org/10.1111/j.1744-6171.2000.tb00086.x

Maramis, J. R., & Cong, J. (2019). Relationship of Hardiness Personality With Nurse Burnout. *Abstract Proceedings International Scholars Conference*. https://doi.org/10.35974/isc.v7i1.1046

Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry*. https://doi.org/10.1002/wps.20311

Masten, A. S. (2019). Resilience from a developmental systems perspective. In *World Psychiatry*. https://doi.org/10.1002/wps.20591

Mazzetti, G., Guglielmi, D., & Topa, G. (2020). Hard enough to manage my emotions: How hardiness moderates the relationship between emotional demands and exhaustion. *Frontiers in Psychology*. https://doi.org/10.3389/fpsyg.2020.01194

McKinley, N., Karayiannis, P. N., Convie, L., Clarke, M., Kirk, S. J., & Campbell, W. J. (2019). Resilience in medical doctors: A systematic review. In *Postgraduate Medical Journal*. https://doi.org/10.1136/postgradmedj-2018-136135

Meaney, M. J. (2001). Maternal Care, Gene Expression, and the Transmission of Individual Differences in Stress Reactivity Across Generations. *Annual Review of Neuroscience*. https://doi.org/10.1146/annurev.neuro.24.1.1161

Menzies, R. E. (2020). Existential Approaches to Personality. In *Encyclopedia of Personality and Individual Differences*. https://doi.org/10.1007/978-3-319-24612-3_1466

Moorfield, C., & Cope, V. (2020). Interventions to increase resilience in physicians: A structured literature review. In *Explore*. https://doi.org/10.1016/j.explore.2019.08.005

Nanda, A., Wasan, A., & Sussman, J. (2017). Provider Health and Wellness. In *Journal of Allergy and Clinical Immunology: In Practice*. https://doi.org/10.1016/j.jaip.2017.05.025

Narayanan, A. (2008). The Resilient Individual: A Personality Analysis Annalakshmi. *Journal of the Indian Academy of Applied Psychology*.

Nur Amir AR, M., & WP, S. E. (2020). Physicians intention to leave from malaysia government hospitals with existing retention strategy. *Journal of Public Health Policy and Planning*. https://doi.org/10.35841/public-health-policy.4.3.30-37

O'Dowd, E., O'Connor, P., Lydon, S., Mongan, O., Connolly, F., Diskin, C., McLoughlin, A., Rabbitt, L., McVicker, L., Reid-McDermott, B., & Byrne, D. (2018). Stress, coping, and psychological resilience among physicians. *BMC Health Services Research*. https://doi.org/10.1186/s12913-018-3541-8

Ogińska-Bulik, N., & Kobylarczyk, M. (2015). Relation between resiliency and post-traumatic growth in a group of paramedics: The mediating role of coping strategies. *International Journal of Occupational Medicine and Environmental Health*. https://doi.org/10.13075/ijomeh.1896.00323

Omar, K., Halim, M. A. S. A., Yusoff, Y. M., Ahmad, A., & Ibrahim, R. Z. A. R. (2018). Assessing intention to leave among public hospital nurses in Malaysia. *Journal of Fundamental and Applied Sciences*.

Ostaszewski, K. (2020). The importance of resilience in adolescent mental health promotion and risk behaviour prevention. In *International Journal of Public Health*. https://doi.org/10.1007/s00038-020-01508-x

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

Panagioti, M., Khan, K., Keers, R. N., Abuzour, A., Phipps, D., Kontopantelis, E., Bower, P., Campbell, S., Haneef, R., Avery, A. J., & Ashcroft, D. M. (2019). Prevalence, severity, and nature of preventable patient harm across medical care settings: Systematic review and meta-analysis. *The BMJ*. https://doi.org/10.1136/bmj.l4185

Penwell-Waines, L., Ward, W., Kirkpatrick, H., Smith, P., & Abouljoud, M. (2018). Perspectives on Healthcare Provider Well-Being: Looking Back, Moving Forward. In *Journal of Clinical Psychology in Medical Settings*. https://doi.org/10.1007/s10880-018-9541-3

Richardson, G. E., Neiger, B. L., Jensen, S., & Kumpfer, K. L. (1990). The resiliency model. *Health Education*. https://doi.org/10.1080/00970050.1990.10614589

Riley, R., & Weiss, M. C. (2016). A qualitative thematic review: Emotional labour in healthcare settings. In *Journal of Advanced Nursing*. https://doi.org/10.1111/jan.12738

Robertson, H. D., Elliott, A. M., Burton, C., Iversen, L., Murchie, P., Porteous, T., & Matheson, C. (2016). Resilience of primary healthcare professionals: A systematic review. *British Journal of General Practice*. https://doi.org/10.3399/bjgp16X685261

Rodriguez, S. B., Bardacci, Y., Aoufy, K. El, Bazzini, M., Caruso, C., Giusti, G. D., Mezzetti, A., Bambi, S., Guazzini, A., & Rasero, L. (2022). Promoting and Risk Factors of Nurses' Hardiness Levels during the COVID-19 Pandemic: Results from an Italian Cohort. *International Journal of Environmental Research and Public Health*. https://doi.org/10.3390/ijerph19031523

Rosen, M. A., DiazGranados, D., Dietz, A. S., Benishek, L. E., Thompson, D., Pronovost, P. J., & Weaver, S. J. (2018). Teamwork in healthcare: Key discoveries enabling safer, high-quality care. *American Psychologist*. https://doi.org/10.1037/amp0000298

Rutter, M. (2006). Implications of resilience concepts for scientific understanding. *Annals of the New York Academy of Sciences*. https://doi.org/10.1196/annals.1376.002

Sadeghpour, M., Fereydooni-Moghadam, M., & Namnabati, M. (2021). The impact of Kobasa and Maddi hardiness model on stress and hardiness of Iranian pediatric nurses: A clinical trial study. *Iranian Journal of Nursing and Midwifery Research*. https://doi.org/10.4103/ijnmr.IJNMR_128_20

Salvatore, D., Numerato, D., & Fattore, G. (2018). Physicians' professional autonomy and theirorganizational identification with their hospital. *BMC Health Services Research*. https://doi.org/10.1186/s12913-018-3582-z

Santarone, K., McKenney, M., & Elkbuli, A. (2020). Preserving mental health and resilience in frontline healthcare workers during COVID-19. In *American Journal of Emergency Medicine*. https://doi.org/10.1016/j.ajem.2020.04.030

Seys, D., Scott, S., Wu, A., Van Gerven, E., Vleugels, A., Euwema, M., Panella, M., Conway, J., Sermeus, W., & Vanhaecht, K. (2013). Supporting involved health care professionals (second victims) following an adverse health event: A literature review. In *International Journal of Nursing Studies*. https://doi.org/10.1016/j.ijnurstu.2012.07.006

Shakir, H. J., Cappuzzo, J. M., Shallwani, H., Kwasnicki, A., Bullis, C., Wang, J., Hess, R. M., & Levy, E. I. (2020). Relationship of Grit and Resilience to Burnout Among U.S. Neurosurgery Residents. *World Neurosurgery*. https://doi.org/10.1016/j.wneu.2019.10.043

Shreffler, J., Petrey, J., & Huecker, M. (2020). The impact of COVID-19 on healthcare worker wellness: A scoping review. *Western Journal of Emergency Medicine*. https://doi.org/10.5811/westjem.2020.7.48684

Sirriyeh, R., Lawton, R., Gardner, P., & Armitage, G. (2010). Coping with medical error: A systematic review of papers to assess the effects of involvement in medical errors on healthcare professionals' psychological well-being. *Quality and Safety in Health Care*.

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

https://doi.org/10.1136/qshc.2009.035253

Slatyer, S., Craigie, M., Heritage, B., Davis, S., & Rees, C. (2018). Evaluating the Effectiveness of a Brief Mindful Self-Care and Resiliency (MSCR) Intervention for Nurses: a Controlled Trial. *Mindfulness*. https://doi.org/10.1007/s12671-017-0795-x

Southwick, S. M., Bonanno, G. A., Masten, A. S., Panter-Brick, C., & Yehuda, R. (2014). Resilience definitions, theory, and challenges: Interdisciplinary perspectives. *European Journal of Psychotraumatology*. https://doi.org/10.3402/ejpt.v5.25338

Søvold, L. E., Naslund, J. A., Kousoulis, A. A., Saxena, S., Qoronfleh, M. W., Grobler, C., & Münter, L. (2021). Prioritizing the Mental Health and Well-Being of Healthcare Workers: An Urgent Global Public Health Priority. *Frontiers in Public Health*. https://doi.org/10.3389/fpubh.2021.679397

Spoorthy, M. S. (2020). Mental health problems faced by healthcare workers due to the COVID-19 pandemic–A review. In *Asian Journal of Psychiatry*. https://doi.org/10.1016/j.ajp.2020.102119

Stoffel, J. M., & Cain, J. (2018). Review of grit and resilience literature within health professions education. In *American Journal of Pharmaceutical Education*. https://doi.org/10.5688/ajpe6150

Strömgren, M. (2017). Intention to leave among health care professionals: The importance of working conditions and social capital. *Journal of Hospital Administration*. https://doi.org/10.5430/jha.v6n3p58

The National Scientific Council on the Developing Child. (2012). The science of neglect: The persistent absence of responsive care disrupts the developing brain. *Center on the Developing Child*. https://doi.org/10.1007/978-90-481-2350-6

Thude, B. R., Juhl, A. G., Stenager, E., von Plessen, C., & Hollnagel, E. (2019). Staff acting resiliently at two hospital wards. *Leadership in Health Services*. https://doi.org/10.1108/LHS-09-2018-0042

Turnbull, A. E., Lau, B. M., Ruhl, A. P., Mendez-Tellez, P. A., Shanholtz, C. B., Needham, D. M., Lieberman, D., Nachshon, L., Miloslavsky, O., Dvorkin, V., Shimoni, A., Als, L. C., Picouto, M. D., Hau, S.-M., Nadel, S., Cooper, M., Pierce, C. M., Kramer, T., Garralda, M. E., … Brunnler, T. (2017). Challenge of assessing symptoms in seriously ill intensive care unit patients: can proxy reporters help? *Critical Care Medicine*.

Tusaie, K., & Dyer, J. (2004). Resilience : A Historical Review. *Holistic Nursing Practice*.

Underdahl, L., Jones-Meineke, T., & Duthely, L. M. (2018). Reframing physician engagement: An analysis of physician resilience, grit, and retention. *International Journal of Healthcare Management*. https://doi.org/10.1080/20479700.2017.1389478

Vagni, M., Giostra, V., Maiorano, T., Santaniello, G., & Pajardi, D. (2020). Personal accomplishment and hardiness in reducing emergency stress and burnout among COVID-19 emergency workers. *Sustainability (Switzerland)*. https://doi.org/10.3390/su12219071

Vagni, M., Maiorano, T., Giostra, V., & Pajardi, D. (2020a). Hardiness, stress and secondary trauma in Italian healthcare and emergency workers during the COVID-19 pandemic. *Sustainability (Switzerland)*. https://doi.org/10.3390/su12145592

Vagni, M., Maiorano, T., Giostra, V., & Pajardi, D. (2020b). Hardiness and coping strategies as mediators of stress and secondary trauma in emergency workers during the COVID-19 pandemic. *Sustainability (Switzerland)*. https://doi.org/10.3390/su12187561

Vincent, C., Neale, G., & Woloshynowych, M. (2001). Adverse events in British hospitals: Preliminary retrospective record review. *British Medical Journal*. https://doi.org/10.1136/bmj.322.7285.517

Walpita, Y. N., & Arambepola, C. (2020). High resilience leads to better work performance in nurses: Evidence from South Asia. *Journal of Nursing Management*.

Volume: 7 Issues: 47 [September, 2022] pp. 377 - 396
Journal of Islamic, Social, Economics and Development (JISED)
eISSN: 0128-1755
Journal website: www.jised.com
DOI: 10.55573/JISED.074735

https://doi.org/10.1111/jonm.12930

Walsh, W. A., Dawson, J., & Mattingly, M. J. (2010). How are we measuring resilience following childhood maltreatment? is the research adequate and consistent? what is the impact on research, practice, and policy? *Trauma, Violence, and Abuse*. https://doi.org/10.1177/1524838009358892

Werner, E. E. (2004). Journeys from childhood to midlife: Risk, resilience, and recovery. In *Pediatrics*. https://doi.org/10.1542/peds.114.2.492

West, P., & Gee, P. M. (2018). Building a Resilient Workforce: Promoting Joy in Clinical Care. *Front Health Serv Manage*.

Wolin, S., & Wolin, S. (2008). Commentary on resilient adolescent mothers: Ethnographic interviews. *Families, Systems, & Health*. https://doi.org/10.1037/h0089861

Yılmaz, E. B. (2017). Resilience as a strategy for struggling against challenges related to the nursing profession. *Chinese Nursing Research*. https://doi.org/10.1016/j.cnre.2017.03.004