REVIEW

Supporting the resilience of healthcare workers in the Gulf Cooperation Council countries: An integrative review

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ABSTRACT

Background: A wide range of evidence has shown that there is a crisis in the mental health of healthcare workers (HCWs) due to the nature of their work. Resilience has been recognized as an essential component in supporting mental health. No synthesized literature concretely defines the concept of resilience or outlines the factors that affect the resilience of HCWs in the Gulf Cooperation Countries (GCC).
Aim: To explore the definition of resilience and to provide a synthesis of the factors that affect the resilience of HCWs in the GCC.
Method: Whittemore and Knafl's framework guided this integrative review. Cumulative Index to Nursing and Allied Health (CINHAL), Medical Literature Analysis and Retrieval System (MEDLINE), and Excerpta Medica Database (Embase) were searched systematically for peer-reviewed primary studies published between 2011 and 2022. Considering inclusion and exclusion criteria, a total of nine articles were included. The Mixed-Methods Appraisal Tool (MMAT) was used to assess the quality of the studies. The socio-ecological model was used for data extraction, analysis, and presentation of findings.
Results: The definition of resilience varies across the included studies. The factors that affect the resilience of HCWs fall within three main themes: intrapersonal factors (individual characteristics and internal influences), interpersonal factors (teamwork and camaraderie), and organizational factors (work setting, availability of resources, shift length, and leadership style).
Conclusions: The resilience of HCWs can be affected by multiple factors. As a result, the interventions targeting the improvement of resilience should be multi-dimensional. Organizational policies should be developed in a way that supports a culture that fosters the resilience of HCWs in the GCC.

Key Words: Resilience, Mental health, Healthcare workers, Gulf Cooperation Council, Socio-ecological model

1. INTRODUCTION

Mental health is an important aspect of a healthy life. According to the World Health Organization,[1] mental health is "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to his or her community." (p. 1) Two continuum models exist for mental health and mental illness: one continuum of ab-

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sence or presence of mental illness and the other continuum of languishing and flourishing.[2] Complete mental health has been defined as being free of mental illness and in a state of flourishing.[2] Flourishing is a state of mental health in which individuals have both a high subjective sense of well-being and optimal psychological and social functioning.[3] Additionally, Keyes[4] found that flourishing was associated with superior profiles of psychosocial functioning. Flourishing mental health is viewed as a source of resilience and a protective factor against stressful life experiences.[5] As such, flourishing is seen to have a positive correlation with resilience.[6,7] Evidence suggests that resilience and complete mental health can prevent the onset of psychopathology.[8–10]

Keyes[11,12] identified three core components of complete mental health: emotional well-being, psychological well-being, and social well-being. Emotional well-being encompasses happiness, interest in life, and satisfaction. Psychological well-being is characterized by a positive attitude toward life, being able to handle the responsibilities of daily living, having good relationships with others, and feeling satisfied.[13] Social well-being refers to positive functioning which includes contributing to one's society and consists of five dimensions: social coherence, social acceptance, social actualization, social contribution, and social integration.[13] This positive functioning leads to improved population health, increased safety, higher quality care, reduced service costs, enhanced care experience, and advanced health equity among the population.

Mental health is an essential component of health and is fundamental for thriving individuals and communities as it impacts the ways people think and interact with each other.[14] However, 970 million people were living with mental illnesses worldwide in 2019.[15] In addition, mental illnesses such as anxiety and depression increased by 26% and 28% respectively between 2018 and 2019.[15] Healthcare workers (HCWs) are not immune from such conditions. A global crisis in HCWs' mental health condition exists which is associated with the nature of their work.[16–18] HCWs work in hard and stressful environments and deal with various issues such as long work hours, adverse patient outcomes, and demands of patient care during high-risk situations with uncertain patient outcomes.[19] These challenges place demands on HCWs and negatively impact their mental health.[20] This negative impact has contributed to a global shortage of HCWs, higher costs, poor work environments,[10] low job performance, poor quality of patient care,[21,22] medical errors,[20,22] infections, patient safety incidents, patient falls, and lower patient satisfaction.[21] Therefore, mental health must be given more attention as a major public health concern and threat to health care services.[23]

The mental health of HCWs is influenced by several factors including individual, social, and organizational factors. Studies have found that individual factors include age, marital status,[24] self-efficacy, profession, gender,[25] past medical history, education level, and work experience.[26] Furthermore, several studies have found that social factors including poor social support,[25] the suffering of family and friends, attachment and coping styles, perception and acceptance of risk, stigma, and social isolation[26] affect mental health and increase anxiety, stress, and depressive symptoms. Moreover, mental health can be affected by organizational factors including excessive workloads or work pace; understaffing; long, unsocial, or inflexible hours; unsafe or poor physical working conditions; limited support from colleagues or authoritarian supervision; job insecurity; and inadequate pay.[27]

According to recent research, nurses' resilience can buffer the negative effects of workplace stressors and improve patient outcomes.[28] Resilience is from the Latin *resilere* [to jump back].[29] Much evidence shows that resilience has several emotional benefits, including enhancing positive emotions, reducing depressive symptoms, and resisting stress.[30] Furthermore, Feder et al.[31] and Rice and Liu[32] have pointed out that resilience increases the cognitive benefits that help an individual to cope with stress, adapt, and solve social problems by using positive coping strategies to improve mental health. Those who are resilient are less anxious and have less burnout.[33,34] In addition, Anyan and Hjemdal[35] found that a higher level of resilience was associated with lower levels of negative psychological consequences. Moreover, Luthar[36] observed that people with higher resilience levels can adapt more successfully to stressful situations than people with lower resilience levels. As such, resilience contributes to survival, flourishing, growth, and improvement after severe adversity.[37] In general, resilience can increase satisfaction with life and mental well-being.[38]

Resilience is also influenced by multiple factors, including individual, community, social, psychological, and organizational factors. Resilience is affected by individual factors such as age, education level,[39–41] gender,[41] years of experience,[40] and nationality.[42] Other factors that exist at the individual level include individual personality, having a higher purpose, and being self-determined with a positive outlook on life.[19] Furthermore, active coping styles, personality traits, optimism, and efficient self-regulation are factors that affect the development of resilience.[30] Other psychological factors, such as optimism, confidence, self-efficacy, high intelligence, and adaptive emotion regulation strategies, have a positive impact on resilience.[43,44] Additionally, community-level factors such as geographical,

national, cultural, community, or social resources can influence resilience.[45,46] Culture is a significant community factor that can affect resilience.[42] As a result, the concept of resilience can be defined differently across cultures.[30] Resilience, however, can be learned and supported[47] through training and education.[48] By incorporating resilience strategies into the healthcare system, healthcare professionals may build the strength and confidence needed to reduce stress and burnout.[49] Therefore, this integrative review aims to explore the definition of resilience and to provide a synthesis of the factors that affect the resilience of HCWs in the Gulf Cooperation Countries (GCC).

2. METHOD

This review followed Whittemore and Knafl's[50] methodological framework for conducting an integrative review. This framework includes five stages: problem identification, literature search, data evaluation, data analysis, and presentation of the results.

2.1 Problem identification

Globally, there is a crisis in the mental health condition of HCWs which is associated with the nature of their work.[16–18] Research has shown that enhancing resilience can improve the mental health of HCWs.[51–53] However, the concept of resilience may be defined differently across cultures.[30] In addition, no synthesis of the literature has been conducted, to our knowledge, about this topic in the GCC. Therefore, there is a lack of understanding of the meaning of resilience in the GCC and its influencing factors for HCWs. This review will be guided by the following research questions:

(1) How is resilience defined in the GCC?
(2) What are the factors that affect the resilience of HCWs in the GCC?

2.2 Literature search

An electronic search was conducted using the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Medical Literature Analysis and Retrieval System (MEDLINE), and Excerpta Medica (Embase) databases. The keywords used to conduct this search were *resilience, HCWs, mental health, socio-ecological model,* and *Gulf Cooperation Council*. The Boolean operators AND and OR were used to narrow or broaden the search. The inclusion criteria were (a) primary research studies, (b) peer-reviewed articles, (c) articles written in English, (d) articles published between 2011 and 2022, (e) qualitative, quantitative, and mixed methods studies, (f) articles that focused on HCWs in the GCC, and (g) studies focused on the resilience of HCWs. The initial search generated 935 articles. All 935 articles were evaluated by two reviewers for inclusion in this review. After removing duplicates, the title and abstracts of 640 articles were reviewed for relevance according to the inclusion and exclusion criteria. An additional 595 articles were eliminated through this process. The full text of the remaining 45 articles was reviewed considering the inclusion and exclusion criteria. The reference lists of these studies were scanned for any relevant articles. Thirty-six of these articles were excluded since they were irrelevant. At the end of each step of the screening process, the two reviewers met to solve any conflict that arose related to the inclusion or exclusion of any articles. As a result, nine articles were found to be relevant for inclusion in this review.

2.3 Data evaluation

The Mixed-Methods Appraisal Tool (MMAT) version 2018 was used to evaluate the nine articles. The MMAT has two parts of appraisal to assess the quality of the studies. The first part is a checklist, and the second part is an explanation of each criterion of the study design.[54] The MMAT has two main steps.[54] The first step is a checklist including two general screening questions.[54] If both questions are answered "yes," the study will proceed to the second step of the appraisal tool, which consists of five categories and criteria to evaluate the methodology of different types of research such as qualitative, quantitative, and mixed methods studies.[54] The second part is an explanation of the criteria for each study design to help reviewers with the evaluation.[54] The critical appraisal of the nine articles by the two reviewers demonstrated that all studies were of high methodological quality.

2.4 Data analysis

According to Whittemore and Knafl,[50] data analysis involves extracting, ordering, coding, categorizing, and summarizing the data from primary sources. Data analysis includes the following phases: data reduction, data display, data comparison, and conclusion drawing and verification.[50] Data reduction involves organizing, simplifying, and abstracting data.[50] In the data display phase, the data from the extraction table is displayed and converted into matrices, graphs, charts, or networks to be a starting point for interpretation and discussion.[50] This stage requires a transformation of the extracted data from individual sources into a display of the data around a particular variable or subgroup from multiple sources.[50] An extraction table was created to summarize the information based on the location of the studies, the aim of the study, the definition of resilience, and the factors affecting the resilience of HCWs. Through the data comparison step, the similarities in relationships, patterns, or themes within

codes are recognized.[50] Whittemore and Knafl[50] stated that utilizing a philosophical or theoretical perspective can facilitate this process. In this integrative review, the socio-ecological model (SEM) was used as a framework to obtain a comprehensive understanding of the factors that affect the resilience of HCWs in the GCC. The SEM describes the factors that influence and interact with an individual's behavior and various levels of environmental factors that shape their behavior and impact their health.[55,56] In this stage of the analysis, similar data were grouped and coded together as themes. The factors that influence resilience were classified into three levels of the SEM: intrapersonal, interpersonal, and organizational. Through the conclusion drawing and verification phase, the relationships among the data at these three levels of the SEM were identified by organizing the information into subgroups according to similarities and differences. The main factors identified that affect resilience among HCWs at the intrapersonal, interpersonal, and organizational levels are shown in Figure 1.

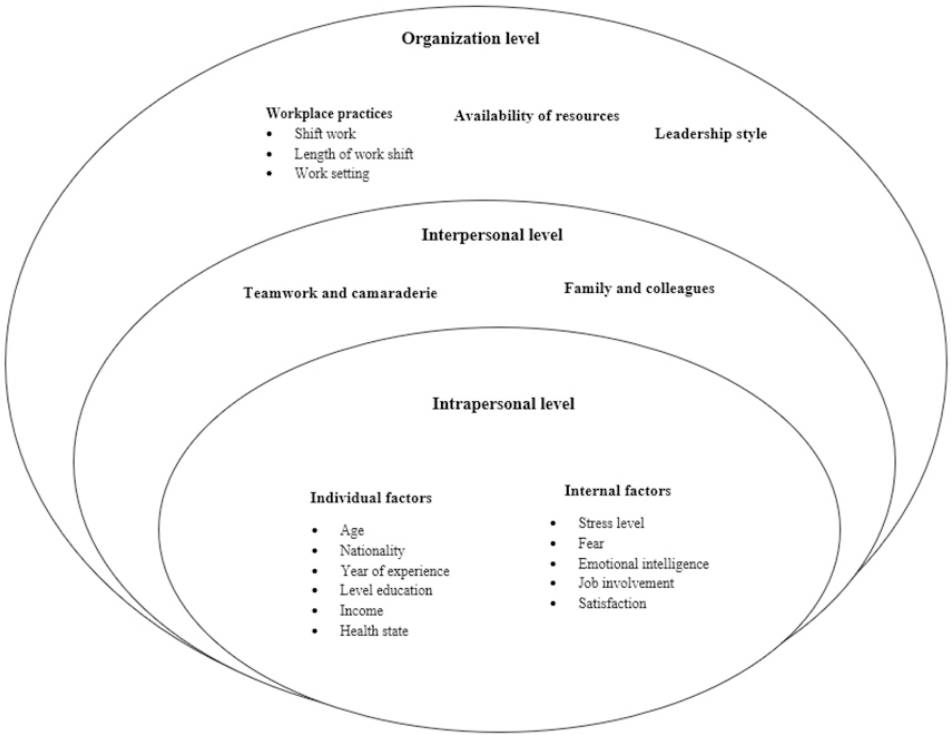

Figure 1. The major themes at each level of the SEM

3. RESULTS

This review includes nine articles that explore the definition of resilience and provide an understanding of the factors that affect the resilience of HCWs in the GCC. Eight studies were quantitative while the other was qualitative. The sample sizes ranged from 60 to 1,200 participants. The studies were conducted in the following countries: Saudi Arabia (n = 6), Qatar (n = 2), and the United Arab Emirates (n = 1). The participants in these studies were HCWs working in health services in the GCC.

3.1 Definitions of resilience

The articles included in this review offered several different definitions of resilience. Naja et al.[57] recognized resilience as an anti-burnout factor for healthcare professionals when they face hardships and significant sources of stress. According to Naja et al.,[57] resilience is defined as the "ability to positively adapt to hardships and significant sources of stress." (p. 2) Al-Omar et al.[52] defined resilience as the "ability of human beings to 'bounce back' when things go wrong." (p. 1045) Aldarmasi[58] described resilience as "the ability to bounce back or recover from stress" and "a protective factor against the development of mental disorders." (p. 1) Almegewly et al.[59] referred to psychological resilience as "a person's ability to adapt to major stressors such as psychological or physiological trauma, threats, tragedies, familial and relationship troubles, job stress, and financial concerns." (p. 3) Abd-EL Aliem and Abou Hashish[60] defined resilience as "the process of people adapting well to the adversities they face and staying optimistic about the future." (p. 274) AlKudsi et al.[61] defined resilience as the "process of adapting and the ability to bounce back when

facing adversity, tragedy, trauma, or stress." (p. 1010)

3.2 Factors that influence the resilience of HCWs in the GCC

Following the SEM, it was found that the factors influencing the resilience of HCWs in the GCC are related to the (a) intrapersonal, (b) interpersonal, and (c) organizational levels.

3.2.1 *Factors at the intrapersonal level*

Individual characteristics have been identified in eight research studies as significant factors that impact resilience.[57–64] Age was found to affect HCWs' resilience. Aldarmasi[58] found a positive relationship between age and the level of resilience of HCWs. However, Alharbi et al.[62] found no significant impact of age on resilience. Nationality was also found to influence the level of resilience. Alharbi et al.[62] discovered that the level of resilience was higher among Saudi nurses than non-Saudi nurses, while Aldarmasi[58] and Aljarboa et al.[63] found that non-Saudi HCWs showed a higher level of resilience than Saudi HCWs. In addition, years of experience influence the level of resilience. Two studies concluded that increased work experience contributes to increased resilience levels.[58,59] However, Alharbi et al.[62] found that work experience was not associated with increased resilience. Moreover, education and income levels can influence resilience levels. Alharbi et al.[62] found that nurses with a high level of education had a higher level of resilience. Al-Omar et al.[52] found that increasing resilience levels are correlated with higher total monthly salaries. HCWs' state of health was also found to impact resilience levels in one article. Naja et al.[57] found that HCWs with chronic diseases were less resilient due to their inability to work with patients face-to-face during COVID-19.

Internal influences, such as stress, fear, emotional intelligence, job involvement, and satisfaction, have been found in eight research studies as significant factors that impact resilience.[57–64] Aldarmasi[58] indicated that there was a negative relationship between a high level of stress and resilience. However, Almegewly et al.[59] found that there was no relationship between COVID-19-related stress and resilience. In addition, Alkudsi et al.[61] found that feelings of fear reduced the level of resilience. Conversely, emotional intelligence has a positive and moderate relationship with resilience.[62] Job satisfaction also impacts resilience levels. Naja et al.[57] noted that higher job satisfaction was associated with higher resilience scores, and feeling neutral or dissatisfied with the level of appreciation was associated with lower resilience scores. In addition, Villar et al.[64] found that having self-confidence and a sense of value and purpose can enhance resilience. Moreover, job involvement has a positive relationship with resilience in the workplace.[60]

3.2.2 *Factors at the interpersonal level*

Interpersonal factors have been found in one study as important factors affecting resilience. Teamwork and camaraderie have a positive influence on HCWs' resilience.[64] Support from family and colleagues makes a positive difference in the resilience of HCWs.[64]

3.2.3 *Factors at the organizational level*

Factors at the organizational level were identified in four studies.[57,58,60,62] Work setting was the most evident factor at the organizational level in the literature. Two studies have noted that work setting influences the level of resilience in different ways.[57,62] Alharbi et al.[62] discovered that nurses who worked in critical units had higher resilience than nurses in burn units. Moreover, Naja et al.[57] pointed out that dieticians who worked in hospitals and public clinics had lower resilience than dieticians who worked in private clinics. The availability of resources also has a positive impact on resilience. Naja et al.[57] found a positive association between the availability of support from organizations, such as providing online counselling for COVID-19 patients, and the resilience of HCWs. The type and length of shift work have also been found to influence the resilience of HCWs. Alharbi et al.[62] noted that nurses who worked 12-hour shifts showed higher resilience scores. Aldarmasi[58] found that HCWs assigned to work the night shift had higher resilience than those working morning, evening, and mixed shift schedules; those working the evening shift had the worst resilience scores. In addition, nurse managers' leadership style impacts nurses' organizational resilience. Abd-EL Aliem and Abou Hashish[60] indicated that transformational leadership has a positive impact on staff resilience.

4. DISCUSSION

Resilience has an important role in promoting and protecting the mental health of HCWs. Understanding resilience and factors influencing the resilience of the HCWs in the GCC is essential in supporting their mental health. This understanding is also critical in enabling healthcare organizations to maintain a resilient workforce in Qatar and to meet Qatar's National Health Strategic Plan 2030. This review has explored definitions of resilience in the GCC context and has distilled the factors that influence resilience into three levels of the SEM.

4.1 Resilience

There is no consistent definition of resilience in research conducted in the GCC context. This finding is similar to a synthesis of systematic reviews completed by Huey and Palaganas.[19] The researchers in the GCC have defined resilience

as an ability or process. This review suggests defining resilience as both an ability and process to bounce back from adversity. Recognizing resilience as an ability focuses on individual capacities and, as a result, on individual factors. In this definition, resilience becomes an innate trait that is limiting in nature. However, defining resilience as a process shifts the focus on this concept to be an acquired trait.[65] In this review, this process was found to be impacted by multiple factors. These factors can facilitate or hinder the process of becoming resilient or enhancing the level of resilience. This finding is supported by Southwick et al.[46] who indicated that humans have great potential to change and adapt, when necessary, but they need resources to do so. The definition suggested here aligns with Pooley and Cohen's[65] definition of resilience: "The potential to exhibit resourcefulness by using available internal and external recourses in response to different contextual and developmental challenges." (p. 34)

4.2 Influencing factors on HCWs' resilience in the GCC

Multidimensional factors at the intrapersonal, interpersonal, and organizational levels affect the resilience of HCWs in the GCC. Some of these factors are modifiable, such as education, income, availability of resources, leadership style, and workplace attributes. On the other hand, some factors cannot be modified, such as age and years of experience. To facilitate the resilience of HCWs in the GCC, interventions should focus on modifiable factors. The availability of these factors can promote or deter the resilience of this group. In this review, the factors have been classified according to their ability to promote resilience.

4.2.1 *Intrapersonal factors*

The intrapersonal level includes individual factors and internal factors. The modifiable factors at this level include education and income. In consensus with this review, other reviews have shown that individual factors such as high level of education and income are significant factors that affect resilience at the individual level.[66–69] In contrast, Gillespie et al.[70] found no association between resilience, education, and income. Similarly, Hart et al.[71] identified discrepancies in the level of resilience based on different demographic characteristics. Therefore, further research is needed to examine the relationship between resilience and demographic factors.

Internally modifiable factors that positively affect the resilience of HCWs include having a sense of purpose, value, self-confidence, job satisfaction, and job involvement as well as a low level of stress and fear. The factors highlighted by this review have also been found in other literature. HCWs who have a sense of purpose in their lives and careers have high levels of resilience. This is similar to the findings of a synthesis of systematic reviews done by Huey and Palaganas[19] who showed the positive impact of a sense of purpose on resilience. These researchers stated that a sense of purpose can assist healthcare professionals when dealing with adversity through the exploration of available resources. Furthermore, a high level of resilience is associated with a high degree of confidence.[72,73] Several studies have suggested that self-confidence is one of the factors that protect psychological well-being.[74–76] According to Nowell et al.,[77] HCWs' confidence is affected by many workplace factors, such as supportive leadership, teamwork, and adequate staffing. Confidence in work reduces chaos and anxiety, which has positive consequences on the resilience of HCWs.[77] Moreover, HCWs who feel more satisfied and are involved in their jobs have a higher level of resilience. This result is supported by Piotrowski et al.[78] and Hudgins[79] who have found a positive relationship between resilience and job satisfaction. Moreover, this review and the literature[80–84] have found low levels of stress and fear to positively impact resilience.

4.2.2 *Interpersonal factors*

At the interpersonal level, support from family and colleagues is the most critical factor. This finding is supported by other research that has shown family plays a crucial role in a person's physical and mental development.[52] This is in line with the findings of Huey and Palaganas[19] and Robertson et al.[83] which have confirmed the positive effects of family and social support on the resilience of healthcare providers. Moreover, this finding is consistent with Sippel et al.'s[85] study that reported a significant impact of family support on resilience levels. In addition, their study showed that social support and being connected with others also promoted resilience. This result is also consistent with the American Psychological Association[86] which stated that good relationships with family, friends, and others enhance and build resilience. This result is also in line with Manomenidis et al.[87] who showed positive associations between resilience and social interactions among colleagues. Similarly, Cameron and Brownie[88] found that support from colleagues could enhance HCWs' resilience.

4.2.3 *Organizational factors*

At the organizational level, the most significant factors include workplace practices, resources, and leadership. The workplace practices affecting the level of resilience include shift length. Working 12-hour shifts has a positive effect on resilience, which may be a result of having more time off during the week due to longer work days. Research shows that people who work 12-hour shifts have more time off during the week and a better chance to have long weekends as compared to those who work 8-hour shifts.[89–92] Moreover, several studies have found that 12-hour shifts have

many advantages, such as lower stress levels, better physical and psychological well-being, improved off-duty sleep duration and quality, and improved family relations.[93–95] However, Robertson et al.[83] found that long work hours negatively affect resilience levels. Furthermore, Olds and Clarke[96] and Stone et al.[97] have noted that long shift work reduces resilience levels, which may be associated with increased medical errors[98] and poor patient outcomes.[96,97] Similarly, Stimpfel and Witkosk[99] discovered that nurses who work more than 12 hours per shift are more prone to burnout, job dissatisfaction, and a desire to leave the profession, which could be related to work stress. Moreover, extended shifts, such as ten hours or longer per day and over time, are associated with increased burnout, job dissatisfaction, medical errors, and poor patient outcomes due to psychological stress.[100–102] Furthermore, the availability of resources that facilitate coping with work challenges and crisis management can positively affect resilience.[103] The results of this review align with the findings of Kuntz et al.[104] and Tonkin et al.[105] who found positive connections between employee resilience and the availability of organizational resources. This review also showed that the availability of resources and interventions in the workplace promotes employee well-being and resilience. Moreover, providing employees with appropriate resources facilitates their ability to develop adaptive capabilities and overcome adversity.[104,106] Another factor found to impact resilience is leadership practices. This review found that transformational leadership can enhance the resilience of HCWs in the GCC. A transformational leader provides support, inspiration, and care to prompt positive emotions and motivation amongst their staff, influencing job satisfaction.[107] Gom et al.[107] indicated that transformational leadership is effective at managing uncertainty, which increases resilience level and the ability to face risk. This is in line with the findings of Muhammad et al.[108] who noted that transformational leadership styles can help to improve employee well-being and resilience. Conversely, Mao et al.[109] found that authentic leadership can also significantly contribute to the growth of employee resilience.

5. Conclusion

The main purpose of this integrative review was to explore the concept of resilience and the factors that affect resilience among HCWs in the GCC. This integrative review found no consistent definition of resilience in research conducted in the GCC context. However, this review suggests that resilience be focused on as an acquired trait in defining it as both an ability and process to bounce back from adversity. Intrapersonal, interpersonal, and organizational level factors affect the resilience of HCWs in the GCC. Some of these factors are modifiable, such as education, income, availability of resources, leadership style, and workplace attributes. On the other hand, some factors cannot be modified such as age and years of experience. To facilitate the resilience of this group, intervention should be focused on modifiable factors. These factors can promote or deter the resilience of HCWs in the GCC based on their availability. This shift in focus is important to enhance and support the resilience of HCWs in Qatar. A high level of resilience supports mental health and improves services provided by HCWs. Introducing the concept of resilience to current HCWs through continuous professional development will be beneficial. Including strategies for enhancing mental health and resilience is important in the education curricula for future HCWs. Additionally, comparative research on resilience among health professionals in the GCC needs to be conducted, paying attention to the community and societal level factors that affect HCWs' resilience. Moreover, there is a need to support and encourage transformational leadership practice in healthcare organizations.

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Authors contributions

NHF was responsible for design, data evaluation and analysis, drafting, and revision. Dr. AT contributed to the review's design, data evaluation, drafting, and revision. AAQ was responsible for design, drafting, and collaboration between the University of Calgary in Qatar and the Primary Health Care Corporation. DF made substantial contributions to the design, drafting, and revision of the review. SA contributed substantially to the design of the review and the literature search.

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No additional data are available.

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