The Contrary Impact of Resilience on the Complicated Nursing Work Environment: A Literature Review

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Abstract

The purposes of this literature review were to analyze in depth studies that were related to resilience among nurses to reflect the current knowledge about resilience and its importance for nurses, to identify the recommended strategies in the literature to build resilience among nurses, and to critically review the studies and the interventions that tested the impact of teaching resilience for nurses. The recurrent nurses exposure to work stressors and adversities has many negative consequences at different aspects related to nurses' wellbeing, quality of care, and organizational intimacy. Resilient nurse is more able to face work stressors and its negative effects. Increasing nurses' resilience for the purpose of surviving in the complicated work environment is a crucial issue in the current century. In this review, it was found that many strategies had been recommended to build resilience and many resiliency programs had been implemented. The results of the implemented programs showed significant improvement among the participants, although there was no consistency over the contents of the programs, and no consistency between the contents of the programs and the recommended strategies that found in the review. The contents of the programs were stress reduction focused rather than the pure resiliency strategies and recommendations. It is recommended to integrate resilience in nursing education at different levels and to develop a well structured resiliency training program based on the pure resiliency strategies that had been recommended to build resilience among nurses.

Keywords

Resilience, Resilient, Resiliency, Nurse, Nurses, Nursing

1. Introduction

Nursing is a challenging profession; nurses in their daily work face many stres-

sors and adversities while they meet the needs of their patients [1]. Stressors and adversities such as patients' acuity levels, rapid admissions and discharges, ineffective communication with patients and other health team members, and work pressure are parts of the nurses' usual routine [2]. Furthermore, the nature of nursing as a humanistic profession increases the expectations of nurses' roles, whereas mistakes are completely not allowed, is an additional stressor for nurses [3].

The most important contemporary issues in health sectors are related to providing high quality and safe practices. Work stressors and adversities affect workers' satisfaction, turnover, performance, and the quality of care that nurses provide to their patients, and thus affect patients' safety [4]. Furthermore, the recurrent nurses exposure to stressors and adversities increases the risk of developing psychological disorders or symptoms such as stress and anxiety [5].

Despite of all work-related stressors and the vulnerability to many challenges and psychological health problems in nursing work environment, many nurses faced the challenges, coped with the environment, and decided to continue in their career to provide their services to patients, families, and community [6]. Resilient nurses are more willing to stay in profession, face workplace stressors, and provide high quality and safe practices to their patients [6]. Nurses with high resilience level have better health, quality of life, better emotions, more able to control their life and face obstacles, and more capable to provide high quality nursing care [7] [8].

Resilience is defined as the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress such as family and relationship problems, serious health problems or workplace and financial stressors. It means bouncing back from difficult experiences [9]. In general, resilience is a part of positive psychology concerning of the wellbeing of humans [10]. The history of resilience concept started in 1970 with research on children who faced stressors. Then, studying the phenomenon moved to adults and elderly. Subsequently, it moved to communities and families [11].

Teaching and training nurses to acquire the skills to become resilient is considered a crucial issue in the current century, which might be reflected to many aspects related to nurses' wellbeing, patient care, and organization intimacy [12]. The purposes of this literature review were to analyze in depth studies that were related to resilience among nurses to reflect the current knowledge about resilience and its importance for nurses, to identify the recommended strategies in the literature to build resilience among nurses, and to critically review the studies and the interventions that tested the impact of teaching resilience for nurse.

2. Method

A comprehensive literature review was performed using the following key terms nurse, nurses, nursing, resilience, resilient, and resiliency. Searching started by using all possible paired combinations between key terms. Databases searched include MEDLINE (Medical Literature on-Line), CINAHL (Cumulative Index to Nursing and Allied Health Literature), and Google Scholar to find an answer to

the question what is current knowledge about resilience in nursing?. The researcher reflected the literature in subsequent themes to facilitate ideas flow in a way that serve the reader and the purposes of the study. The presented themes are Types of resilience, protective variables and risk variables, the current level of resilience among nurses, and the importance of resilience for nurses; strategies and recommendations to build resilience; and the impact of implementing resiliency education programs on nurses. Eligibility criteria were: 1) published in the period between 2009 and 2019, 2) qualitative or quantitative studies, 3) published in Arabic or English, 4) and nurses or nursing students are the majority of the sample. A total of 742 studies were identified in initial screening. After removing duplicated studies, total of 574 studies remained and matched to inclusion criteria; availability of full text; and title relevancy in the review. The full text reviewed studies were 127 studies, total of 42 studies were selected due to its relevant informative data. See Figure 1, studies selection diagram.

3 Result

3.1. Study Description

Most of the studies on resilience were quantitative studies, descriptive and experimental studies. The reviewed studies were conducted mostly in USA (13 studies), Asia and Australia (15), and Europe countries (9) among nurses who were working in clinical sittings.
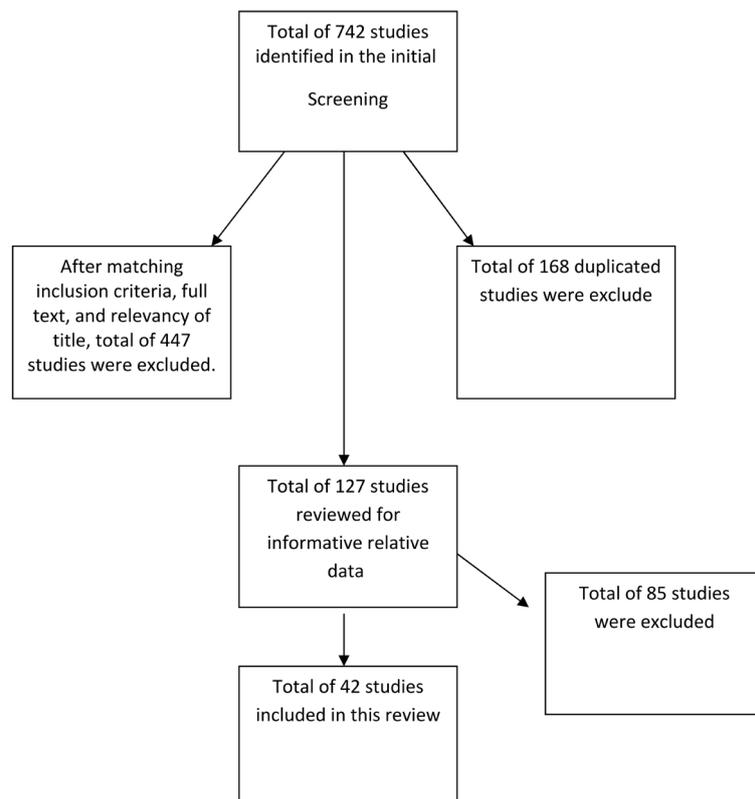

Figure 1. Studies selection diagram.

3.2. Types of Resilience, Protective Variables and Risk Variables, the Current Level of Resilience among Nurses, and the Importance of Resilience for Nurses

[13] categorized resilience in nursing into four types: 1) type I, reality harmonic type. Staffs belong to type I do not rely on other or any external factors to face workplace stressors, they using realistic coping skills such as going to break or off duty; 2) type II, own will type. Staffs belong to this type decide to continue their works with stressors and try to improve their mental health and self esteem; 3) type III, professionalism oriented type. Staffs belong to this type have a sense of accomplishment to their duties and trying to gain support from patients and families; and 4) type IV, relation oriented type. Staffs belong to this type are proud of being a nurse and gaining support from colleagues to do so. However, there are many variables affect nurses' resilience [14].

The protective variables that affect nurses' resilience are categorized into internal and external protective variables. The internal protective variables include emotional intelligence, optimism, cognitive elasticity, altruism, consciousness, creativity, being extroverted, openness, autonomy, adherence to ethical and moral principles, sense of humor, trust, coping skills, selecting resilient persons as a model, acceptance, appreciating oneself, realistic thought, positive thoughts and personality, self awareness, and control feelings [1].

The external protective variables are classified into social and professional protective variables. Social protective factors include effective connection with family and social networks and resources. Professional protective factors include professional experience, satisfaction, being engaged, collaboration, being adaptive, positive work environment, peer support, team problem solving, being aware of workplace stressors, separate social life from job, mutual respect with team members, open discussion with colleagues, trust, and succession appreciation [1]. On the other hand [15] searched the literature and summarized the risk factors that affect nurses' resilience. The risk factors include poor nursing competencies, in effective coping skills, poor team work and support, and negative expectations toward the profession.

Nurses' resilience levels are very low [12]. In a national survey in the United States among 3500 nurses, only 22% of the nurses scored high on resilience level [16]. In South Africa, among 312 nurses, only 43% of nurses had high resilience skills [17]. Furthermore, among 31 nursing leaders, 4 leaders only scored high on resilience [18]. There is a strong need to improve nurses' resilience for the purpose of improving and maintaining many aspects related to nurses, profession, and patient care [12].

Nurses with high resilience levels are more satisfied, able to fight challenges, and approaching life better [7] [19]. Furthermore, resilience decreases turnover, job pressure, and physical health problems, as well as it increases nurses' happiness and career development [20] [21]. In term of the quality of care that provided to patient, it is reported that resilient nurses providing a higher quality of care to their patients [8].

There is an emphasis in the descriptive literature on the possible impact and the association of resilience with nurses' psychological wellbeing. a study conducted in China among 1356 nurses form 11 hospitals implied that there is a negative relationship between resilience and stress, self efficacy, and restriction in using coping mechanisms among the participants [12]. A study conducted in Singapore among 1338 nurses reported that resilience has direct negative effect on stress and burnout, and has positive effect of compassion satisfaction [6]. Another study recruited a random sample consists of 275 representative nurses in Gaza-Palestine to test the relationship between stress and resilience. Negative correlation between resilience and stress was found [22].

[23] developed a resilience conceptual model. The model illustrated the negative impacts of the workplace stressors on the psychological wellbeing of the nurses including stress, burnout, compassion fatigue, depression, and anxiety. As well as, it is clarified in the model that resilience directly decreases all the previously mentioned psychological indicators that resulted from nursing workplace stressors. [19] tested Ress and her colleagues' model among 1743 Australian nurses, and confirmed that resilience is significantly correlated negatively with anxiety, burnout, depression, compassion fatigue, and stress.

Improving nurses' resilience for the purpose of controlling workplace related stressors and consequences on nurses, profession, and quality of care is a crucial issue in the complicated nursing environment [16]. It is highly recommended to integrate resilience in nursing education at different levels including undergraduate curriculum, newly hired nurses orientation programs, and in hospital education [19] [24]. Resilience development is a shared responsibility between employees and organizations [25]. However, resilience is seen as a trait and as a process [8] [26]. Once it is a process, it acquired, can be changed with time, and can be learned and developed [24] [27].

3.3. Strategies and Recommendations to Build Resilience

Many recommendations and strategies had been suggested to build resilience in nursing and guide the development of resiliency programs. [28] suggested that breaks of providing continuous care for stressful patients, going for leave after patients dying, emotional support, and attendance to informal social meetings out of the hospital are recommended to build and maintain nurses' resiliency.

[2] summarized three main dimensions that target the needed interventions or strategies to build resiliency in nursing: 1) personal development, focuses on developing personal skills such as cognitive ability, optimism, hope, and being engaged in educational programs; 2) workplace characteristics, prepare healthy environment that facilitate teamwork, peer support, and mentorship; 3) social network, focusing on maintaining balanced life and the development of the professional and social relationships.

[29] implied that building nurses' resiliency is totally based on developing self efficacy and self regulation. According to Boardman, self efficacy development depends on internal competencies rather than any others external recourses.

Whereas, nurses need to believe in their abilities to control outcomes, thus, they can overcome changes and stressors. Nurses can accomplish self regulation by learning techniques such as mediation and mindfulness. Mindfulness is technique that helps persons to be aware of his internal feeling and thoughts, and being involved in the surrounding environment at the same time [29].

A conceptual model to build resilience in newly hired nurses developed by [21] illustrated that the process of resilience development consists of three steps: 1) paying attention to self survival, at this point nurses need to learn self control and self protection. Self control in term of controlling unfavorable behaviors that may negatively impact his performance. Self protection in regards with the development of desired behaviors that help nurses to maintain healthy reactions to work stressors; 2) caring of clinical situations, increasing nursing adherence to the workplace by providing support and continuous feedback from both mangers and colleagues; 3) caring of patients, by increasing feeling of achievement towards the efforts that provided to patients.

[30] adopted Neuman System Model to develop primary, secondary, and tertiary strategies or interventions to build resilience in nurses. The primary intervention emphasizes on recognizing the risk factors and preventing the occurrence of stressors and stressful situation. In this stage, nurses needs to open communication channels with colleagues, build trust relationship, and engage in training courses that help them to adapt effectively in stressful situations. The secondary intervention focuses on identifying the occurred stressful situation and seeking support to prevent the undesired consequences. The tertiary intervention concerns of eliminating the negative response of stressors and maintain stability. Nurses needs to reflect on the situation and share the experience with colleague to eliminate its impact and build a defense wall for future.

In spite of the some variation in the recommended strategies to build resilience, there is a consensus over other strategies that are congruent with the outcomes of a grounded theory conducted by [31]. [31] summarized four main strategies to improve resilience among nurses including protecting: building emotional barriers to prevent the negative impacts of stressors and stressful situations, processing: to relief the impact of stressors and stressful situations, decontaminating: to remove the influence of stressors and stressful situations, and distancing: to be physically away from stressors and stressful situations.

3.4. The Impact of Implementing Resilience Education Programs on Nurses

One of most common resiliency program is Stress Management and Resiliency Training Program (SMART). The program was developed in Mayo Clinic by Dr Sood [32]. In a randomized control trial, SMART program was implemented among 55 nurses in the United States, although the sample size was small, there was significant improvement in resilience level and significant decrease in stress level among the participants [33].

Another study conducted in the United States approached randomized con-

trol trial design, and used SMART program among 40 participants implied that there were significant improvements in resilience (P = 0.003) and the psychological outcomes (P values ranged from 0.001 - 0.030) among the participants, despite of the small sample size [32]. On the other hand, [33] implemented and measured the impact of SMART program on 54 nurses. The result of resilience level among participants was improved, but there was no statistically significant improvement in the psychological outcomes.

Although the implementation of SMART program showed a significant improvement in resilience and stress levels across different groups of healthcare professionals [34], the content of the program is directed toward stress management skills rather than focusing on pure resiliency skills or strategies [32].

Mindfulness is a part of self regulation that help person to be aware of his internal feelings and being concentrated with the external stimulus. It is considered as one of the methods that promote resilience among nurses [29]. [35] conducted mindfulness based interventional study on 20 Australian female nurses. Although the sample was small and not representative, the result of the study showed significant improvements in the psychological outcomes among the participants. However, [35] did not measure the resilience level of participants.

A mindfulness based randomized control study conducted in the United States among 34 ICU nurses, showed a significant improvement in resilience level among the participants [36] [37]. Moreover, the result of a mindfulness based resilience study that conducted by [38] in Australia among 91 nurses. The result of the study showed significant improvement in resilience and the psychological outcomes after the intervention, but the intervention held only over one day and in a single hospital. On the other hand, the result of mindfulness based resiliency program implemented by [39] on 20 nurses in United States implied that the resilience level among participant was not changed.

[10] applied sensory simulation therapy as a resilience intervention among 31 Operation Theater and ICU nurses in South Africa. There was a significant improvement in resilience level after the intervention. Authors measured the impact of the intervention on resilience only. However, the sample size was very small and the study conducted in one private hospital only. Moreover, based on self efficacy and self regulation as a resiliency strategies, [29] developed a resiliency training program and measured its impact on resilience and stress among 40 nurses only in the United States. The resilience level and stress level were enhanced after the intervention. Moreover, in a brief resilience workshop conducted by [40], there was no significance difference in resilience levels before and after the intervention.

In a systematic review conducted by [36] on the resilience interventional studies, it is reported that 16 out 24 studies showed significant improvement in resilience scores after the intervention. Moreover, [40] conducted a literature review for the best way to conduct resilience intervention. [40] implied that Workshops and educational program is the best way to provide resilience interventions for healthcare professionals. Summary of the main outcomes is presented in Table 1.

Table 1. Main outcomes.

Authors	Concern	Outcomes
Shin *et al.*, (2018)	Types of resilience	1) Type I, reality harmonic type. Staffs belong to type I do not rely on other or any external factors to face workplace stressors, they using realistic coping skills such as going to break or off duty; 2) type II, own will type. Staffs belong to this type decide to continue their works with stressors and try to improve their mental health and self esteem; 3) type III, professionalism oriented type. Staffs belong to this type have a sense of accomplishment to their duties and trying to gain support from patients and families; and 4) type IV, relation oriented type. Staffs belong to this type are proud of being a nurse and gaining support from colleagues to do so.
(Cam, 2015)	Resilience internal protective variables	Resilience internal protective variables include emotional intelligence, optimism, cognitive elasticity, altruism, consciousness, creativity, being extroverted, openness, autonomy, adherence to ethical and moral principles, sense of humor, trust, coping skills, selecting resilient persons as a model, acceptance, appreciating oneself, realistic thought, positive thoughts and personality, self awareness, and control feelings.
(Cam, 2015)	Resilience external protective variables	Resilience external protective variables are classified into social and professional protective variables. Social protective factors include effective connection with family and social networks and resources. Professional protective factors include professional experience, satisfaction, being engaged, collaboration, being adaptive, positive work environment, peer support, team problem solving, being aware of workplace stressors, separate social life from job, mutual respect with team members, open discussion with colleagues, trust, and succession appreciation.
(Cam, 2017)	Resilience risk factors	Resilience risk factors include poor nursing competencies, in effective coping skills, poor team work and support, and negative expectations toward the profession.
(Mróz, 2015; Hegney, Rees, Eley, moisson, & Rees, 2015)	Importance of resilience for nurses	Nurses with high resilience levels are more satisfied, able to fight challenges and approaching life better.
(Benada & Chowdhry, 2017; Lyu, Xu, & Li, 2018)		Resilience decreases turnover, job pressure, and physical health problems, as well as it increases nurses' happiness and career development.
(Williams et al, 2016).		Resilient nurses providing a higher quality of care to their patients.
(Ren *et al.*, 2018)		Resilience is negatively correlated with stress, self efficacy, and restriction in using coping mechanisms.
(Ang *et al.*, 2018		Resilience has direct negative effect on stress and burnout, and has positive effect of compassion satisfaction.
(Roberts, Johnson, & Lalonde, 2016)		Breaks of providing continuous care for stressful patients, going for leave after patients dying, emotional support, and attendance to informal social meetings out of the hospital are recommended to build and maintain nurses' resiliency.
(Yılmaz, 2017)	Recommendations to build resilience	Three main dimensions to build resiliency in nursing: 1) personal development, focuses on developing personal skills such as cognitive ability, optimism, hope, and being engaged in educational programs; 2) workplace characteristics, prepare healthy environment that facilitate teamwork, peer support, and mentorship; 3) social network, focusing on maintaining balanced life and the development of the professional and social relationships.
(Boardman, 2016)		Building nurses' resiliency is totally based on developing self efficacy and self regulation.
(Lyu *et al.*, 2018)		1) Paying attention to self survival, at this point nurses need to learn self control and self protection. Self control in term of controlling unfavorable behaviors that may negatively impact his performance. Self protection in regards with the development of desired behaviors that help nurses to maintain healthy reactions to work stressors; 2) caring of clinical situations, increasing nursing adherence to the workplace by providing support and continuous feedback from both mangers and colleagues; 3) caring of patients, by increasing feeling of achievement towards the efforts that provided to patients.

Continued

(Turner & Kaylor, 2015)		Primary, secondary, and tertiary strategies or interventions to build resilience in nurses. The primary intervention emphasizes on recognizing the risk factors and preventing the occurrence of stressors and stressful situation. In this stage, nurses needs to open communication channels with colleagues, build trust relationship, and engage in training courses that help them to adapt effectively in stressful situations. The secondary intervention focuses on identifying the occurred stressful situation and seeking support to prevent the undesired consequences. The tertiary intervention concerns of eliminating the negative response of stressors and maintain stability. Nurses needs to reflect on the situation and share the experience with colleague to eliminate its impact and build a defense wall for future.
(Jackson *et al.*, 2018).		Summarized four main strategies to improve resilience among nurses including protecting: building emotional barriers to prevent the negative impacts of stressors and stressful situations, processing: to relief the impact of stressors and stressful situations, decontaminating: to remove the influence of stressors and stressful situations, and distancing: to be physically away from stressors and stressful situations.
(Chesak *et al.*, 2015).		SMART program was implemented among 55 nurses in the United States, although the sample size was small, there was significant improvement in resilience level and significant decrease in stress level among the participants
(Sood *et al.*, 2011)		SMART program among 40 participants implied that there were significant improvements in resilience and the psychological outcomes among the participants, despite of the small sample size.
Foureur etal., (2013)	The Impact of implementing resiliency training program	Conducted mindfulness based interventional study on 20 Australian female nurses. Although the sample was small and not representative, the result of the study showed a significant improvement on the psychological outcomes among the participants.
(Cleary etal., 2015)		Mindfulness based randomized control study conducted in the United States among 34 ICU nurses, showed a significant improvement in resilience level among the participants.
(Slatyer, 2018)		The result of a mindfulness based resilience study that conducted in 2018 in Australia among 91 nurses. The result of the study showed significant improvement in resilience and the psychological outcomes after the intervention.
(Marais *et al.*, 2016)		Sensory simulation therapy as a resilience intervention among 31 Operation Theater and ICU nurses in South Africa. There was a significant improvement in resilience level after the intervention.
(Boardman, 2016)		Among 40 nurses only in the United States. The resilience level and stress level were enhanced after the intervention (self efficacy and self regulation resiliency program).

4. Discussions

4.1. Summary of Evidences

In the searched literature, there were many identified stressors and adversities affecting nursing in their daily work. Poor controlling of theses stressors will negatively impact different aspects related to nurses' wellbeing and the quality of care that provided to the patients [41]. Resilience can release and compensate the negative impact of the stressful work environment on the psychological wellbeing and the other aspects related to nurses [12].

Resilience level among nurses is low and below the general population average [12]. There is a strong need to develop and implement resiliency education program for nurses and integrate it in nursing education [19] [26]. Furthermore, there is a consensus over that resilience is a process, can be learned, and it is very beneficial to nurses [24] [27].

In this review, many resiliency strategies or skills were found and recommended by researchers to increase resilience and control stress and anxiety among nurses. There was an agreement over group of strategies and recommendations that are congruent with [31] suggested recommendations to build resilience among nurses. Jackson and her colleagues summarized four main strategies to improve resilience among nurses including: protecting: building emotional barriers to prevent the negative impacts of stressors and stressful situations; processing: to relief the impact of stressors and stressful situations; decontaminating: to remove the influence of stressors and stressful situations; and distancing: to be physically away from stressors and stressful situations.

Some researchers in the field developed resiliency programs and tested their impacts on nurses' resilience and psychological outcomes. Most of the conducted interventional studies reported significant improvement in resilience and stress among participants. In a systematic review, total of 16 studies out of 24 studies showed significant improvement in resilience levels after the implementation of resiliency programs [36].

Despite the significant improvement of the resiliency program on resilience and the psychological outcomes among nurses, it is noticed that there is no consensus over the contents of the programs. In other words, the issue of nursing resiliency programs' contents is still debatable. Up to the time, there is no a unified universally approved program to build nursing resilience [42]. Furthermore, the contents of the programs were not consistent with the pure recommended strategies suggested by the researchers in the field. Most of the implemented resiliency training programs were stress reduction or mindfulness based resiliency program. Programs were not directed toward the pure resilience skills or strategies that mentioned in the litterateur. Meanwhile, there is an agreement in the literature over a group of resilience skills or strategies. There is a need to develop a new resiliency training program based on the agreed pure resiliency skills and strategies and integrate in nursing education program.

4.2. Limitation

A large group of quantitative studies in comparison to qualitative studies is one of the limitations of this study. The search was restricted to the basic terminology nurses, nurses, nursing, resilience, resilient, and resiliency synonyms terms were not considered in the search.

4.3. Conclusion

Resilience has a positive and direct impacts on many aspects related to nurses' wellbeing, patients care, and organizations intimacy. There is a strong need to develop a unified resilience program based on the recommended strategies that are mentioned in the literature and integrate it with nursing education.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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