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The heroism of nurses during the COVID-19 pandemic: A phenomenological study from Jordan

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Abstract. *Purpose*. This paper aimed to shed light on the phenomenon of heroism among nurses by conducting semi-structured interviews with a purposive sample of nurses of a well-known hospital in Jordan in January and February 2021 who stood up against the COVID-19 virus pandemic. Those nurses were exposed to the risk of being infected and possible death in a critical and uncertain situation. *Design*. The study described the lived experiences of those nurses, identified the meanings of those experiences, and clustered those meanings in themes guided by the descriptive phenomenological view of Husserl and using the descriptive phenomenological analysis method of Colaizzi. *Findings*. The study highlighted several elements related to heroism derived from nurses' experiences, i.e., the hero understands the risky situation, has the desire to help others, is confident, faces stressors, benefits from the existing supporting system, copes positively, and ends up with positive outcomes. At last, the study proposed a model for heroism. *Value of results*. The study opens the door for understanding the phenomenon of heroism based on the nurse's lived experiences and its impact on individuals and organizational performance. The study recommended teaching heroism to people and preparing them for risky situations as a strategy for business continuity during crises. Also, the authors encourage scholars to conduct further qualitative and quantitative research about heroism in other contexts considering cultural differences, various work environments, and crisis types.

Keywords: heroism, nurses, organization, COVID-19 pandemic, phenomenology, descriptive phenomenological analysis.

Introduction

The recent COVID-19 virus pandemic, which exploded in January 2020 and is still spreading rapidly until today, has extremely affected most of the world countries, including the USA, Russia, Brazil, Spain, Italy, UK, India, France, Germany, Peru, Turkey, Iran, Chile, Canada, Mexico, Saudi Arabia, China, and others (Worldometer, 2020). The COVID-19 virus pandemic, as identified by

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Deloitte (2020), impacted seriously all aspects of people's life, including, transportation, retail sales of nonessential goods, leisure, hospitality, financial services, education, energy and oil, and other sectors. For examples, L. Jones, D. Palumbo, and D. Brown underlined that the price of a barrel of the West Texas Intermediate (WTI) turned negative for the first time in history, more than 30 million people reported unemployment in the USA alone between mid of April and the end of May 2020, and most the world countries have banned travelers from outside to enter those countries, which impacted dramatically the overall global airline traffics (Jones, Palumbo, Brown, 2020). Furthermore, the WHO (2021) has announced about 113,472,254 confirmed cases of COVID-19 over the entire world from February 2020 to February 2021, including 2,520,658 deaths.

On the other side, people have turned to technology as governments across the world have encouraged employees to work from home as far as possible. Therefore, shares in technology and communication companies have risen sharply as many people relied on them to do their job, including telemedicine and shopping (Jones et al., 2020).

In this context, governments and health authorities have called all health care providers to stand in the front in wartime against the rapid outbreak of the COVID-19 virus in communities. Nurses have led a large portion of healthcare activities, such as screening many people for COVID-19 virus infection everywhere, including emergency departments, ambulatory health care clinics, airports, borders, and the field's screening centers. They further have taken the lead to monitor asymptomatic infected people in the crowded quarantining areas and to treat sick people in the hospital's wards and intensive care units. Those nurses moved to do risky jobs without any personal intention except to help people and support their communities against COVID-19 pandemic.

Although this phenomenon was obvious among nurses since the time of Florence Nightingale, the authors argue that this phenomenon was not examined critically in literature and is still not well understood. Accordingly, the authors carried out semi-structured interviews for a purposive sample of five nurses of a well-known hospital in Jordan in January and February 2021 to describe their conscious experiences, discover their meanings, cluster them in themes, and come out with a structured conclusion. The study could fill the gaps related to nurse's heroism, including the theoretical gap of lack of evidence in literature that explain the phenomenon and could serve as a trigger for further future academic works and the practical gaps of the lack of awareness among managers about the benefits of heroism for organizations and how to boost this phenomenon among employees.

The next parts of this paper are including the literature review, the methodology, the findings, the conclusion, recommendations for future research, and an acknowledgment.

Literature review

Heroism

K. Blau, Z. Franco, and P. Zimbardo underlined that the historical view of heroism is some people have God-like power. For example, Achilles and Hercules possessed physical powers or talents that were out of reach of ordinary persons, and Socrates and Jesus, who sacrificed to change society, possessed the power of rationalization and strong personalities. However, heroism is an old phenomenon, the authors pointed out that some modern researchers are looking for a practical view of heroism that empowers modern societies in times of trouble instead of both the historical view that is unreachable by most people, and the modern view, which created by the media (Blau, Franco, Zimbardo, 2009). Furthermore, Z. Franco and P. Zimbardo argued that the view of heroism as a universal attribute of humans that makes everyone a potential hero debunks the myths that heroism refers to few people who own very rare personal characteristics (Franco, Zimbardo, 2006-07).

Consequently, modern scholars have proposed several definitions of heroism. Z. Franco and P. Zimbardo proposed one definition as "the individual's commitment to a noble purpose and the willingness to accept the consequences of fighting for that purpose" (Franco, Zimbardo, 2006-07). This definition suggests that the act must be voluntary, involve potential physical peril or profound social sacrifice, performed without expectation of extrinsic gain, aim to serve others, and the actor must be willing to accept the consequence of her or his action. P. Zimbardo further highlighted two keys to heroism; first to act when other people are passive, and secondly, to act socio-centrically, not egocentrically (Zimbardo, 2008). Others researchers also defined heroes as "those who incur costs (e.g., risk of injury or death; or significant sacrifices such as time, money, or other forms of personal loss) to deliver greater-than-expected benefits to others" (Baumard, Boyer, 2013).

In connection with the above review, it was identified 12 central traits carried by heroes based on functions that are moral integrity, bravery, conviction, courage, self-sacrifice, selflessness, determination, inspiration, helpful, protective, honesty, and determination. Those central traits were rated higher in heroes than role models and leaders. Further it was identified 10 peripheral traits carried by leaders, which are powerful, strong, fearless, demonstrating conviction, displaying leadership, proactive, determined, intelligent, inspiring, and willing to risk compared to heroes and role models as well as five traits carried by role models, which are the talent, honest, personable, exceptional, and humble than both heroes and leaders (Kinsella, Ritchie, Igou, 2015).

In few words, the modern theory of heroism is clearly distinguished from theories of altruism, pro-social behaviour, and risk-taking behaviour, and empirical research demonstrated that the terms heroes, leaders, and role models are not synonymous in meaning (Franco, Allison, Kinsella, Kohen, Langdon, Zimbardo, 2016).

The profession of nursing

K. J. Egenes claimed that nursing care was practiced in ancient communities without formal training and education; nurses learned their art from traditions, observations, and trial and error (Egenes, 2009). However, Florence Nightingale (1820-1910), the British nurse who founded modern nursing, established the first school of nursing in 1860, published a book titled "Notes on Hospitals", which focused on how to run civilian hospitals properly, and published another book titled "Notes on Nursing" in 1859, and she worked frequently as a consultant on how to manage field hospitals and as an authority on public sanitation issues (History, 2009).

In her book "Notes on Nursing", Florence Nightingale wrote that the knowledge that leads to a state of having no disease or promotes recovery from disease is distinct from medical knowledge, and everyone should have it. She also added nursing is not only the administration of medicine, rather it is extended to signify the proper use of the environmental key elements that are the fresh air, light, warmth, cleanliness, quiet, and the proper selection and provision of diet to assist in recovery (Nightingale, 1859). So, the nurse needs to know the ways by which she can provide better health to patients based on Florence Nightingale's environmental theory by identifying all environmental factors and know the ways to correct them to gain the optimum level of recovery and satisfaction among patients (Sher, Akhtar, 2018).

Recently, Nursing is defined by the Free Dictionary (n.d.) as "the scientific application of principles of care related to prevention of illness and care during illness". Further, The International Council of Nurses (ICN) (n.d.) proposed a broad definition of nursing that is "Nursing, as an integral part of the health care system, encompasses the promotion of health, prevention of illness, and care of physically ill, mentally ill, and disabled people of all ages, in all health care and other community settings". Furthermore, nurses advocate and promote a safe environment, research, and participate in shaping health policy, health systems management, and education (The International Council of Nurses (ICN) (n.d.). Accordingly, the roles of nurses are considered vital for individuals, groups, communities, and the entire global health.

Heroism in nursing

Although it is hard to track the history of heroism in nursing, the authors focused their review on Florence Nightingale, a popular hero among nurses. Florence Nightingale, according to A. Gonzalo, was born on May 12, 1820, to a rich British family that belonged to elite social circles (Gonzalo, 2019). The story of Florence Nightingale started with being an active member in philanthropy, serving the ill and poor people in a village near to her family's estate. Then, she joined a nursing school, regardless of the objections of her parents as this was against their will and the community view for the woman's job. L. Neal-Boylan highlighted several heroic situations in her life, included that she volunteered to move to the front lines with a team of 38 nurses to treat the wounded soldiers of the Crimean War between 1854 and1856 regardless of the risk of the war and the bad conditions of the field's hospitals (Neal-Boylan, 2020). She was called at that time the "The Lady with the Lamp" as she used to do her rounds using an oil lamp to light her way. She also used her own money to establish the Nightingale Training School in 1860 to train nurses based on her model of care and send them to hospitals all over Britain. Furthermore, she continued working from home, as she contracted the Crimean fever at age 38 years and stayed bounded to bed for the rest of her life, as an authority, advocating for health care reform, interviewing distinguished visitors, and publishing her valuable books (History, 2009).

In line with the heroism of Florence Nightingale, the stream of heroism among nurses did not stop. Nurses responded to calls in several global and local uncertain situations, e.g. the American civil war in the 1860s, the yellow fever epidemic of 1878, the World War I, the influenza pandemic in 1918, polio epidemic from 1916 to 1954, the global pandemic of influenza A in 1957 and 1958, AIDS pandemic, which began in 198, swine flu between 2009 and 2010, Ebola in 2014 and 2016, and Zika between 2015 and 2020, and currently the COVID-19 virus epidemic, which began in January 2020 until today (Neal-Boylan, 2020).

The roles of nurses in COVID-19 virus crises

WHO (2019) tracked 1483 epidemic events in 172 countries between 2011 and 2018, such as influenza, Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS), Ebola, Zika, plague, Yellow Fever, and others. Recently, the European Centre for Disease Prevention and Control (2020) reported the Coronavirus as a newly discovered virus, which is an infection that is transmitted very fast from human to human via the coughed or exhaled droplets, contacting with infected people, and touching the contaminated surfaces causing acute respiratory disease. Recent reports and studies from China revealed that around 80% of the reported cases had mild and moderate symptoms, 13.8% had severe symptoms, and 6.1% were critical. Furthermore, data from China, Italy, and South Korea on the diagnosed COVID-19 cases revealed that the overall fatality rate was 2.3%, 2.8%, and 0.5%, respectively. The fatality rate increases with age and in those who have underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer (European Centre for Disease Prevention and Control, 2020). The American Academy of Nursing claimed the significance of nursing leadership role in early recognition of communicable diseases and further called them to develop a basic coordinated network in each country involving the front-line individuals and communities to enable them to recognize early the symptomatic individuals and respond to the emerging or re-emerging infections (Corless et al., 2018).

Nurses are facing the threat of the COVID-19 virus directly by assessing and triaging large numbers of patients who could be infected to discover infected cases and limit the spread of the disease (Jordan, 2020). It was also highlighted the crucial role of nurses in preventing the rapid spreading of the Coronavirus within the hospital setting, managing medical supplies such as masks, gloves, and hand sanitizer to prevent scarcity of these supplies, enforcing sanitation rules and procedures, and

teaching others everything about disease prevention and control. Nurses worked extended shifts, burned out, and some of them got infected (Jordan, 2020). Nurses are the most valuable asset during this crisis and they will always be on the front lines during the current COVID-19 virus pandemic (Phillips, Catrambone, 2020).

The American Nurses Association (ANA) has published "The Code of Ethics for Nurses with Interpretive Statements", which guides nurses in extraordinary contexts, such as the fields of battle, pandemics, political turmoil, regional conflicts, or environmental catastrophes. Nurses must decide the optimum level of quality that can be provided to patients, while maintaining their safety at the same time (American Nurses Association, 2014).

Methodology

Research purpose and questions

In this paper, the authors described the phenomena of heroism as consciously experienced by a group of nurses, who responded voluntarily to work at the front lines without any personal intention during the epidemic of the COVID-19 virus. The authors carried out in-depth interviews for a purposive sample of five nurses of a well-known hospital in Jordan in January and February 2021 to describe their experiences, understand their meaning, cluster them in themes, and come out with a conclusion. Accordingly, the main research questions are:

- How do the selected participants describe their experiences regarding working in the front lines to limit the epidemic of the COVID-19 virus?
- What are the main meanings and themes of those experiences?
- What is the outcome of those experiences, meanings, and themes?

The significance of the study

Heroism among nurses has been discussed by scholars since the time of Florence Nightingale. As the heroism of nurses was not adequately studied in literature, this paper used the descriptive phenomenological research view that approaches the phenomenon of nurse's heroism via the description of the lived experience of a group of nurses who involved in the heroic action during the COVID-19 pandemic, considering their perception, thought, memory, imagination, emotion, desire, volition to bodily awareness, embodied action, and social activity as claimed by Stanford Encyclopedia of Philosophy (2013).

The study could help to fill the theoretical gap about this phenomenon. For example, it could provide a deep understanding of the nurse's heroism, including its determinants, mechanism, and outcomes and could benefit managers to understand the positive impact of heroism on their business performance and guide them about how to raise heroism among their employees based on the business needs.

Study design

The authors approached this study by applying the descriptive qualitative phenomenological design. Researchers who require discovering a phenomenon and understanding its meaning should obtain that from the lived experiences of participants (Husserl, 1983). Thus, this design could help the authors of the study to view the phenomenon of heroism based on the experiences of those heroes rather than the opinions of the others.

The data collected from a purposive sample of five nurses, which is considered adequate for phenomenological studies (Creswell, 1998; Morse, 1994), from a tertiary hospital in Jordan. Also, the authors noticed that they reached the point of data saturation early, and no new themes appeared. Accordingly, they stopped recruiting more participants. The five nurses were among a group of nurses

who moved from their original units to establish the first 10-bed intensive care unit for COVID-19 patients in the country at the beginning of the crisis in February 2020. Those nurses were selected based on meeting the three elements of heroism, which are to commit to a noble purpose and act socio-centrically, act when other people are passive, and act in a situation that involves a potential physical risk or profound social sacrifice without expectation of extrinsic gain (Franco, Zimbardo, 2006-07; Zimbardo, 2008; Baumard, Boyer, 2013). In the case of this study, the authors specified the context of COVID-19 pandemic.

The above criterion was introduced to nursing managers in Prince Hamza Hospital in Jordan and asked them to suggest nurses, who met the criteria and could be interviewed. The authors met the participants based on their availability and agreements to participate. The authors conducted multiple meetings with every participant, as recommended by Englander (2012), included (1) a preliminary meeting to introduce themselves to the participant and explain the purpose of the study, (2) a meeting to carry out the actual semi-structured, in-depth interview, and (3) a meeting to clarify any unclear information if needed. Guerrero-Castañeda, Menezes, and Ojeda-Vargas (2017) claimed that the authors should prepare two or three clear open-ended questions to guide the interview. Accordingly, the authors suggested three main questions and a few sub-questions as follows.

1. Please describe in detail as possible your experience of working with patients infected with COVID-19?
   - Tell us about the situation in which you decided to move to the front lines during the COVID-19 virus pandemic? (Ask when appropriate)
   - Tell us about any other reason that influenced your decision? (Ask when appropriate)
   - How has this situation impacted your life? (Ask when appropriate)
   - Tell us about the risk that you have experienced? (Ask when appropriate)
   - Can you describe a situation in which you remembered something emotional? (Ask when appropriate)
2. Tell us how did you adapt to the new situation?
   - What support did you get during working in a risky situation? (Ask when appropriate)
3. What does it mean for you to step up against the COVID-19 virus pandemic?
   - What does it mean for you to be seen as a hero? (Ask when appropriate)
   - What lessons have you learned from this experience? (Ask when appropriate)

To overcome the language barriers, the authors interviewed in Arabic and then translated the transcript to English. To ensure the validity of the final report and prevent unintentional errors in translating the meanings, the authors retranslated the English report to Arabic and then asked the participants to comment on the final Arabic version.

Results

Background Information

The authors interviewed five nurses in January and February 2021. The five participants are married and having children. Table 1 presents participant's age, gender, education, position, units, and years of experience.

Table 1. The demographic information of the participants

Variable	Category	Frequency	Percent
Age	24 – 30	1	20%
	31 – 40	2	40%
	41 – 50	2	40%
	51 – 60	0	0

Gender	Female	1	20%
	Male	4	80%
Education	Diploma	0	0
	Bachelor	5	100%
	Master	0	0
Position	Assisting Nurse	0	0
	SN	4	80%
	Assisting Manager	1	20%
Years of experience	1 – 10	1	20%
	11 – 20	4	80%
	Above 20	0	0
Unit	Intensive Care Unit	1	20%
	Cardiac Care Unit	3	60%
	Kidney Dialysis Unit	1	20%
Total		5	100%

Descriptive Phenomenological Analysis — Colaizzi Method

P. Colaizzi suggested seven steps to conduct a descriptive phenomenological analysis (as cited in Morrow, Rodriguez, King, 2015). The authors applied steps 1, 2, and 3 by reviewing the final transcript of data several times, highlighted many significant statements from the report, and then formulated meanings for those statements relevant to the phenomenon in Appendix 1. The authors also coded those statements. For example, the first experience mentioned by the first participant has been coded as Part.1-S1 and so on. Then, the authors applied step 4 of the P. Colaizzi method by clustering the identified meanings into common themes across all stories, including, risky situation, understanding the situation, the desire to help, self-efficacy, challenges, including psychological stressors, situational challenges, discrimination, and contradicting attitudes of people towards nurses, supportive system, compassionate empathy, problem-focused coping mechanisms, and benefits, such as professional benefits, positive personal attitudes, and self-esteem and actualization (table 2).

Table 2. The meanings of the significant statements and their common themes that are relevant to heroism

The Statement Code	The Meaning	Frequency	The Theme
Part.4-S1, Part.4-S2	Positive and realistic perception of the crisis.	2	Understanding the situation
Part.1-S1, Part.2-S2, Part.3-S1, Part.4-S3, Part.5-S2	The desire to help and have values	5	Desire to help and have values
Part.1-S1, Part.2-S2, Part.3-S1, Part.4-S3	Awareness of personal strengths	8	Self-efficacy
Part.2-S3	The ability to deal with risky tasks.		
Part.2-S1	Being the first.		
Part.3-S3	Leading by example		
Part.3-S2	A desire for confrontation and challenge.		
Part.1-S5	Emotional empathy about family.	13	Psychological stressors
Part.1-S2, Part.2-S4, Part.2-S8, Part.4-S9, Part.5-S3	Concerns about family safety.		
Part.1-S4, Part.2-S5, Part.3-S4, Part.3-S7	A psychological stressor of being isolated from family.		
Part.4-S10	A psychological stressor of being isolated from people.		
Part.2-S4, Part.5-S3	Concerns about colleague's safety.		
Part.2-S7, Part.5-S1	Perception of physical and technical challenges.	5	Challenges – situational
Part.4-S4	Perception of lack of knowledge.		
Part.4-S5, Part.2-S17	Perception of lack of awareness of people about the disease.		

Part.2-S6, Part.3-S13, Part.4-S7	Perception of personal discrimination.	4	Challenges – experience of discrimination
Part.4-S10	Experience of discrimination against the family.		
Part.2-S14, Part.4-S14	Contradicting attitudes of people towards nurses working with COVID-19.	2	Challenges – contradicting attitudes of people towards nurses
Part.1-S6, Part.2-S9, Part.2- S10, Part.2-S11, Part.4-S11, Part.5-S4	Sad memory and compassionate empathy about patients.	7	Compassionate empathy
Part.1-S11	Understanding the fears of people.		
Part.1-S9	Appreciation of the family support.	9	Support system
Part.1-S10	Appreciation of people's support.		
Part.2-S13	Feeling appreciation of patient's support		
Part.3-S11, Part.3-S12, Part.4-S12	A Feeling of appreciation of colleagues and managers support		
Part.5-S5	Positive perception of the team support.		
Part.5-S6	Recognition of the family support.		
Part.1-S3, Part.3-S5, Part.3-S9	Active coping	6	Positive coping mechanism (Problem-focused)
Part.2-S12, Part.3-S10	Coping by accepting the situation		
Part.3-S8	Coping by seeking information		
Part.1-S7	Perception of improved work efficiency.	9	Benefits of the COVID-19 crisis
Part.1-S8	Positive perception of team-work.		
Part.1-S13, Part.5-S8	Perception of positive change in personal attitudes		
Part.3-S6, Part.3-S17, Part.4-S6, Part.4-S17	Perception of professional benefits.		
Part.3-S18	Perception of positive change of people attitudes		
Part.2-S16, Part.3-S15, Part.3-S16	Positive attitude and responsibility toward the community.	3	Positive personal attitudes
Part.1-S12, Part.2-S15, Part.3-S14, Part.4-S13, Part.4-S15, Part.4-S16, Part.5-S7	A feeling of pride and satisfaction about their contributions.	7	Self-esteem and actualization

At last, the authors applied steps 5, 6, and 7 of the P. Colaizzi method (as cited in Morrow et al., 2015) by developing a complete description of the phenomenon, combining all the themes to produce a basic structure of the phenomenon, and lastly validating the proposed structure with the participants to decide whether it presents their experience or not. The authors will discuss those steps in the next section.

Discussion

Modern scholars proposed several realistic definitions of heroism that are different from the historical view that presented heroes as unique people with extraordinary characteristics and powers.

For example, P. Zimbardo defined heroes as those who first act socio-centrically when other people are passive (Zimbardo, 2008). This study aimed to shed more light on the concept of heroism by conducting a descriptive phenomenological analysis of the lived experiences of nurses who were recognized as heroes for their efforts in fighting the COVID-19 global crisis. In this study, the participants met the definition of P. Zimbardo by being the first nurses who moved from their original units to establish the first 10-bed intensive care unit in Jordan for COVID-19 cases.

The analysis of the lived experiences of the participants highlighted several themes. The first theme is "The nurses understand the situation is risky". The nurses responded to the hospital management call in the critical time of the COVID-19 pandemic to establish the first Intensive Care Unit (ICU) in the country even though they could be infected. One nurse said that "I knew that COVOD 19 was a dangerous virus transmitted fast and may end with severe symptoms and death".

Furthermore, “The nurses understand the situation has advantages and disadvantages”. For example, one nurse expressed that “I believe that COVID-19 crisis had advantages and disadvantages”. The authors conclude that the participant’s positive understanding of the situation, including risks, advantages, and disadvantages. The participated nurses had a cognitive ability that included effective thinking process, which led those nurses to understand the risky situation clearly and control their thoughts based on reality rather than untrue facts, and in turn influenced their emotions, decisions, and behaviors positively to participate in the heroic action and to be the first movers in the crisis.

The analysis identified “The nurses desire to help and have values” as the second theme. The nurses expressed a concrete desire to help and serve their country and people. One of them said I joined to support colleagues to manage the increasing numbers of infected people and another one said I volunteered to prevent the impact of the crises on my people and country. The participant’s desire to help people is also a critical psychological factor in being the first movers during the COVID-19 crisis. The desire to help others could be explained in this situation by internal forces of motivation of behavior, including the personal values and high morals, which was reflected by using specific words, e.g., they rationalized their desire to help as a “national duty”, “an opportunity to serve their people”, and for “humanitarian, religious, and professional reasons” and the cognitive processes of those nurses. In addition, the analysis identified “The nurses can or self-efficacy” as the third theme of the study. The participant’s awareness of personal strengths, including the knowledge and skills, made them confident in their ability to deal with the risky tasks related to the COVID-19, able to challenge, and lead by example. Therefore, confidence or self-efficacy is another critical psychological factor that drove the participants to be the first movers during the COVID-19 crisis.

The phenomenon of heroism is found to have other sides. The analysis highlighted several factors that affected positively and negatively the efforts of the involved nurses. The study revealed the fourth theme as the “The nurses experienced challenges during the heroic action”. The involved nurses experienced several challenges including, psychological stressors, such as concerns about family and colleague’s safety and being isolated from others, situational challenges, such as physical and technical challenges, lack of knowledge, and lack of awareness of people about the disease, as well as discrimination. On the other hand, the study revealed the fifth theme as the “The nurses received support during the heroic action from various sources”. In detail, the involved nurses were influenced positively by the support received from families, colleagues, management, and the patients themselves. They were also influenced positively by some emotional events with patients, called compassionate empathy that encouraged them to take action to help by continue doing heroic actions to help patients who suffered during the sickness time. For example, one nurse said that “Some sick patients rejected the ventilators. I tried to convince them to accept the machine” and another nurse said, “I felt responsible for my patients who were sick and isolated from their families”.

The analysis also revealed a sixth theme as “The nurses coped positively with the stress and challenges of the heroic action”. The involved nurses used problem-focused coping mechanisms, such as accepting the situation, active coping, and seeking information. For examples, one nurse mentioned that “I took some precautions, including strict self-cleanness, and sterilization” and “We learned to be efficient, we developed our skills in doing specific tasks and completing the work fast” and another nurse said, “I focused on searching for new and updated information about the new virus”.

At last, the analysis highlighted “The nurses have perceived positive outcomes from the heroic action” as the seventh theme. The descriptive analysis of the involved nurse’s experiences highlighted three positive outcomes for the heroic action, including professional benefits, positive personal attitudes, and self-esteem and actualization. For example, one nurse said “We learned a lot about dealing with pandemics and making the health care system always ready” and another nurse said “It

was a unique experience that improved my wisdom and communication skills", and "I was proud of my contribution".

In addition, the authors, based on J. Paly arguments about using the interview data to construct models that explain phenomena rather than merely describe or interpret them (Paly, 2017), proposed a new model for heroism based on the analysis of the lived experiences of the group of heroic nurses during the global pandemic of COVID-19 (Fig. 1).

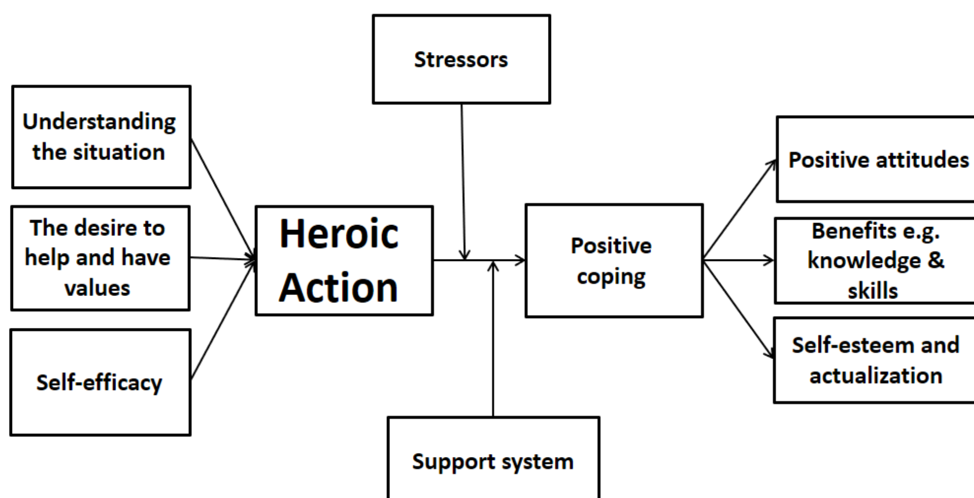

Figure 1. A proposed model of heroism based on the lived experiences of nurses during the COVID-19 pandemic

The proposed heroism model presents a comprehensive description of the phenomenon of heroism. First, heroism is not a spur of the moment; some critical predicting factors should be always available, including a risky situation, and a hero or heroes who understand the situation, desire to help others, and have high self-efficacy; secondly, performing a heroic action; thirdly, the presence of a positive moderating supporting system and having a feeling of compassionate empathy toward people that enhance the heroic action; fourthly, the presence of negative moderating factors that could limit the heroic actions, including psychological stressors and other physical challenges, fifthly, heroes use principally positive coping mechanisms as a mediator between the risky heroic action and the final outcome of the situations; and sixthly, they always perceive the positive outcome of their action, including gaining new knowledge and skills, gaining positive attitude, and self-esteem and actualization.

Finally, the results of the study, including the themes and the proposed model, were validated with the participants, and they approved the content.

Conclusion

The story of nurses during the COVID-19 pandemic highlighted that heroism is a genuine phenomenon among nurses, from the time of Florence Nightingale until today, always nourished by their sacrifices. The study explored the experiences of a group of nurses during the COVID-19 crisis and identified the heroism of nurses as an essential element for enhancing continuity of people's life during the COVID-19 pandemic and keeping the health care sector and facilities functioning at a high-performance level. Accordingly, the authors proposed a model that illustrates all variables identified by interviewing a group of nurses, who responded first to support patients during the COVID-19

pandemic and can be adopted by organizations for maintaining business continuity, particularly when all people get panic and only heroes move to perform a required action in a risky situation.

Although heroism was ignored for a long time by business managers and owners, the proposed model could help business managers to understand the phenomenon of heroism, including its benefits to their business, and how to boost it among employees, which in its turn, could enhance business continuity in crisis. The heroism model also confirms that heroism is not a spur of the moment, but it requires a cognitive ability to understand the risky situation, ethical and high morals to own the desire to help people, and a high self-efficacy and confidence to participate in heroic situations. It also describes the positive and negative moderation factors that could affect the heroic actions and the significant role of the problem-focused coping to reach the positive outcome of the heroic actions.

Finally, the authors argue that heroism is not necessary an accidental or unsystematic action. On the contrary, people should learn and be prepared for such moments.

Recommendation for future research

The authors encourage scholars to conduct more qualitative research about heroism in other contexts considering cultural differences, various work environments, and crisis types. They also recommend testing the proposed model of the heroism of nurses during the COVID-19 pandemic quantitatively to confirm or adjust the outcomes and then generalize the results.

Limitation of the study

The authors identified one significant limitation, included collecting data from participants from one hospital in Jordan and in the context of one crisis, namely the COVID-19 pandemic.

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Appendix 1. The significant statements and their meanings that are related to heroism

Code	Statement (Unit of the meaning)	Meaning
Part.1- S1	I realized that it is a national duty to put my knowledge, skills, and experience at the service of my people in such an uncertain time.	Awareness of personal strengths, and the desire to help.
Part.1- S2	I was very anxious and had fears about protecting my family, including my children and old parents.	Concerns about family safety.
Part.1- S3	I took some precautions, including strict self-cleanness, and sterilization.	Active coping to protect family.
Part.1- S4	I isolated myself from my family. This added more stress to my life.	A psychological stressor of being isolated from family.
Part.1- S5	I explained to my little daughter the reasons for avoiding her. I was emotionally affected when I saw that she couldn't understand what I was telling her.	Emotional empathy about family.
Part.1- S6	Some sick patients rejected the ventilators. I tried to convince them to accept the machine. I suffered while seeing them dying slowly.	Sad memory and compassionate empathy about patients.
Part.1- S7	We learned to be efficient. We developed our skills in doing specific tasks and completing the work fast.	Perception of improved work efficiency.
Part.1- S8	We worked as a team and supported each other. We were confident.	Positive perception of team-work.
Part.1- S9	Also, my husband provided me with high support.	Appreciation of the family support.
Part.1- S10	Some people supported me and showed appreciation.	Appreciation of people's support.
Part.1- S11	I understood the fears of those people who stopped visiting me to avoid possible infection.	Understanding the fears of people.
Part.1- S12	It is an achievement. I am proud of supporting my people. I attended a nursing program for this aim.	Positive feelings about the contribution.
Part.1- S13	I became more faithful, tolerant, and forgiving.	Perception of positive change in personal attitudes.
Part.2- S1	I volunteered early to deal with COVID-19 cases. I was there when the hospital received the first cases.	Being the first.
Part.2- S2	I volunteered as that was an opportunity for me to use my unique knowledge and skills to prevent, as possible, the impact of the crises on my people and country.	Awareness of personal strengths, and the desire to help.
Part.2- S3	As a nurse, I used for such risky tasks.	The ability to deal with risky tasks.
Part.2- S4	I had terrible fears about the risk of transferring the virus to my family and senior colleagues.	Concerns about family and colleague's safety.
Part.2- S5	My life dramatically changed. I was isolated from my family.	A psychological stressor of being isolated from family.
Part.2- S6	Some friends, neighbors, and others expressed their fears about me.	A feeling of stigma and discrimination.
Part.2- S7	The workload increased significantly, the duty time changed, and the massive shut down. It was difficult for me to reach the workplace, especially at night.	Perception of physical challenges
Part.2- S8	I spent a terrible time when I got symptoms like COVID-19 infection waiting for my test's result. I was scared that the virus transferred to my family.	Concerns about family safety.
Part.2- S9	I felt responsible for my patients who were sick and isolated from their families. Nurses were the only chance for them to contact humans. Sadly, I could not get closer to them more.	Compassionate empathy about patients.
Part.2- S10	I remember some children who were scared from the nurses as they saw them wearing the unfamiliar full personal protective equipment.	Sad memory and compassionate empathy about patients.
Part.2- S11	I felt pain when I saw patients confused and suffer from the disease.	Compassionate empathy about patients.
Part.2- S12	My fears immediately ended when I started working with my first patient.	Coping by accepting the situation
Part.2- S13	My patients supported me. They expressed their appreciation and prayed to us.	Feeling appreciation of patient's support

Part.2- S14	Some people were frightened of me, and many others expressed their appreciation to us and perceived our work as humanitarian, heroic, and patriotic.	Perception of contradicting attitudes of people towards nurses.
Part.2- S15	I was proud of my contribution.	Positive feelings about the contribution.
Part.2- S16	It was a unique experience that improved my wisdom and communication skills.	Perception of professional benefits.
Part.2- S17	Some people did not take the disease seriously, which raised the number of cases.	Perception of a negative attitude of people toward the crises.
Part.2- S18	I learned that health is a treasure that everyone should appreciate.	Positive change in attitudes.
Part.3-S1	I volunteered for humanitarian, religious, and professional reasons. The disease also required highly trained nurses.	Awareness of personal strengths, and the desire to help.
Part.3-S2	I knew that COVOD 19 was a dangerous virus transmitted fast and may end with severe symptoms and death. This motivated me to confront the disease.	A desire for confrontation and challenge.
Part.3-S3	I was motivated by my responsibility as a leader to my co-workers to stand with them and lead by example.	Leading by example
Part.3-S4	I reduced my contact with my children and my old parents. This affected me psychologically.	A psychological stressor of being isolated from family.
Part.3-S5	I avoided kissing and touching my children. Also, I could not kiss my father's hands (a common value in eastern societies to show respect for parents).	Active coping to protect family.
Part.3-S6	It improved my professional experience as I did not work before with pandemics and breakouts.	Perception of professional benefits.
Part.3-S7	I isolated myself from people, which was a new thing for me as I lived in a highly connected society.	Concerns about being isolated from family.
Part.3-S8	I focused on searching for new and updated information about the new virus.	Coping by seeking information.
Part.3-S9	I changed my practice by working with patients with barriers, not as before.	Active coping to using protection measurement.
Part.3-S10	My faith in God was great support for me.	Coping by accepting the situation
Part.3-S11	I received support from my colleagues, managers, and the hospital.	Appreciation of the support of colleagues and managers.
Part.3-S12	The manager used to tell us that we will not be infected if we wear the personal protective equipment properly.	Appreciation of manager's support
Part.3-S13	Some people avoided me.	A feeling of discrimination.
Part.3-S14	I was proud of my role, especially in supporting my colleagues in the work field.	Positive feelings about the contribution.
Part.3-S15	I also provided education for people on-phone about the prevention and the treatment for those who were quarantined at home.	Positive attitude and responsibility toward the community.
Part.3-S16	I tried to convince some of those who denied the existence of the virus.	Positive attitude and responsibility toward the community.
Part.3-S17	We learned a lot about dealing with pandemics and making the health care system always ready.	Perception of professional benefits.
Part.3-S18	People learned how to adapt to crises.	Perception of positive change of people attitudes
Part.4-S1	I believe that COVID-19 crisis had advantages and disadvantages.	Positive and realistic perception of the crisis.
Part.4-S2	Although the crisis affected the entire life by spreading fears, people realized the importance of social relationships and being ready for future crises.	Positive and realistic perception of the crisis.
Part.4-S3	I joined the COVID-19 ICU to serve the country and people with my unique skills and experience at this difficult time.	Awareness of personal strengths, and the desire to help.
Part.4-S4	My main challenge was the lack of certain information about the infection, particularly the treatment protocol.	Perception of lack of knowledge challenge.
Part.4-S5	We faced the challenge of low awareness of people about the disease.	Perception of lack of awareness of people about the disease.

Part.4-S6	My experience improved during this period. I feel that I am now much better.	Perception of professional benefits.
Part.4-S7	I was infected with the COVID-19 virus. I felt bad as many people mentioned that in a negative manner.	A feeling of personal discrimination.
Part.4-S8	My children and family were also offended unintentionally by others	A feeling of discrimination against my family.
Part.4-S9	I had fear about the possibility of transferring the virus to my children, colleagues, and other people.	Concerns about family safety.
Part.4-S10	I was socially isolated due to my work with COVID-19 patients.	A psychological stressor of being isolated from people.
Part.4-S11	I remember a young man who was admitted to the COVID-19 ICU, who suffered psychologically from seeing patients dying in the unit.	Sad memory and compassionate empathy about patients.
Part.4-S12	We received exceptional psychological support from the managers who observed the unit days and nights.	Appreciation of management support.
Part.4-S13	I was happy when some friends and neighbors who were infected with the virus contacted me seeking advice.	Positive feelings and about the contribution.
Part.4-S14	I was so upset by people's attitudes toward me. Later, I noticed a big change as they understood my role better.	Perception of positive change of people attitudes towards nurses.
Part.4-S15	The public image about employees working in the governmental hospitals changed significantly and people expressed deep appreciation to us.	Positive feelings and satisfaction about the contribution.
Part.4-S16	I feel satisfied as we succeeded to influence the public image about us.	Positive feelings and satisfaction about the contribution.
Part.4-S17	I learned to be patient and I gained new skills and knowledge.	Perception of professional benefits.
Part.5-S1	COVID-19 affected significantly nurse's jobs by forcing new duty times, new techniques, and wearing annoying personal protection equipment all the time.	Perception of physical and technical challenges.
Part.5-S2	I joined the COVID-19 ICU to support my colleagues to manage the increasing numbers of infected people. I assisted them to serve my people and country.	Awareness of personal strengths, and the desire to help.
Part.5-S3	My main concern was to stay safe to avoid transferring the infection to my colleagues and family.	Concerns about family and colleague's safety.
Part.5-S4	Some of my patients were unable to take sips of water or stay without oxygen. I was affected emotionally when they passed away in a short time.	Compassionate empathy about patients.
Part.5-S5	The main source of support for us was the cooperation of the team's members. It was impressive.	Positive perception of the team support.
Part.5-S6	I noticed clear appreciation from my family.	Recognition of the family support.
Part.5-S7	Although we did not receive the expected level of attention and support, we were still satisfied and proud of supporting people.	Positive feelings and satisfaction about the contribution.
Part.5-S8	I learned that human lives are valuable. Thus, everyone should do his best to save them.	Positive change in attitudes.

Героизм медсестёр во время пандемии COVID-19: феноменологическое исследование

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Аннотация. *Цель*. Эта статья направлена на то, чтобы пролить свет на феномен героизма среди медсестер путём проведения полуструктурированных интервью с целевой выборкой медсестёр известной больницы в Иордании в январе и феврале 2021 года, которые противостояли пандемии вируса COVID-19. Эти медсёстры подвергались риску заражения и возможной смерти в критической и неопределённой ситуации. *Дизайн*. В исследовании описывался жизненный опыт этих медсестёр, определялись значения этих переживаний, затем значения группировались по темам, руководствуясь дескриптивно-феноменологическим взглядом Э. Гуссерля и используя метод дескриптивно-феноменологического анализа П. Колаицци. *Результаты*. В исследовании было выделено несколько элементов, связанных с героизмом, основанных на опыте медсестёр: герой понимает рискованную ситуацию; стремится помочь другим; уверен в себе; сталкивается со стрессорами; извлекает выгоду из существующей системы поддержки; успешно справляется; добивается положительных результатов в итоге. В исследовании предложена модель героизма. *Ценность результатов.* Исследование открывает двери для понимания феномена героизма на основе жизненного опыта медсестры и его влияния на отдельных людей и деятельность организации. Рекомендуется обучать людей героизму и готовить их к рискованным ситуациям в качестве стратегии обеспечения непрерывности бизнеса во время кризисов. Кроме того, авторы призывают учёных проводить дальнейшие качественные и количественные исследования героизма в других контекстах, учитывая культурные различия, различную рабочую среду и типы кризисов.

Ключевые слова: героизм; медсестры; организация; пандемия COVID-19; феноменология; дескриптивный феноменологический анализ.