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Nurses' perception of troubled conscience in intensive care units: a qualitative study

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Abstract

Background Troubled conscience results from the lack of attention to the voice of conscience. Regarding the fact that ICU healthcare workers are constantly faced with stressful and challenging situations, they often experience a troubled conscience.

Aim This study aimed to explain the factors leading to troubled conscience and identify the consequences of troubled conscience among ICU nurses.

Methods Qualitative content analysis was used to answer the research question. A total of 18 ICU nurses were selected to participate in this study using purposive sampling. Data were collected using face-to-face, semi-structured interviews.

Findings Four categories of "carelessness", "contextual challenges", "non-supportive and unpredictable structure" and "whirlpool of troubled conscience" were shown to constitute the main causes of troubled conscience among ICU nurses.

Conclusion Troubled conscience negatively impacts nurses and is associated with psychological/behavioral changes among them. The identification and explanation of troubled conscience help healthcare providers to confront it and manage its causes.

Keywords Conscience, Ethics, Intensive care unit, Nurse, Qualitative study

Introduction

The concept of conscience is related to emotions, and motivates or prohibits individuals in relation to a subject. It also forms one's moral argument and guides him/her towards the right path and right behavior based on his or her value system [1]. Conscience is rooted in sensation and nurses consider conscience as a motivating and limiting force that is also a source of sensitivity. Conscience is the cornerstone of ethics [2, 3] and for the nursing profession that is the basis for ethical nursing care and practices [2]. The role of conscience in nursing is expressed in various ways, such as warning and signal, and also increases sensitivity towards patient needs [4]. Jensen and Lidell showed that nurses consider conscience as an important factor in their professional practice

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[3]. Mazaheri et al. argue that conscience is an internal guide for nurses, and also it is dynamic and cultural base [4]. Conscience is the cornerstone of ethics and has an impact on personal and professional life [2]. Conscience is an ethical concept whose necessity is not hidden in the nursing profession, so that it has positive effects on nursing performance and guides nursing care from an ethical viewpoint [5]. In nursing, conscience is defined as authority, warning signal, feeling and sensitivity, valuable things, burden and responsibility, the essence of nursing and dependent on context, and in nursing practice, it is broadly the basis for ethical affairs and ethical nursing care. The role of conscience in nursing is expressed in different parameter, such as warning, guiding and increasing sensitivity, guiding ethics towards the patient's needs [2, 5, 6].

Evidence shows that in situations where patient care and treatment do not go hand in hand with the nurses' conscience, the understanding of situation will be negative and nurses will suffer from troubled conscience and conflict of conscience [1, 7]. Troubled conscience defined as a feeling of guilt, weakness, inability and inadequacy [8], which is painful for individuals and can last for a long time and cause stressed conscience in them [9]. The concept of a troubled conscience has been defined diversely in the literature, depending on how conscience itself is understood within specific contexts and approaches. Conscience has been presented in various ways across religion, psychology, philosophy, care sciences, and other fields. An important aspect of this diversity in definitions is their cultural context. For instance, while Iranian ICU-nurses within an Islamic culture, describe the conscience as the cornerstone of morality and an intrinsic asset which must be followed [1], the Swedish nurses and physician in a secular context with a Christian cultural framework expressed that conscience can give misleading signals and should not always be followed directly [2]. In the study by Mazaheri et al. (2017), the meaning of a troubled conscience among enrolled nurses in older people care was characterized by feelings of being a bad person. This included perceiving oneself as uncaring, failing to act in accordance with one's values, and experiencing a general sense of unease [4]. Evidence shows that troubled conscience threatens the physical and mental health of nurses, and is in conflict with patient safety and quality of nursing care, so these experiences have harmful consequences for nurses and are associated with burnout [7, 10].

Munkeby et al. in their study state that troubled conscience means abandoning ideals, and facing realities; they state that insufficient time, disloyalty to colleagues, and failing dependent patients lead to the troubled conscience in nurses [11]. Although this study expresses the meaning of troubled conscience in nurses but do not mention the consequences of troubled conscience that can affect the nurses and nursing. However, in Munkeby et al. study, nurses often experience a troubled conscience that could be strong or weak and of shorter or longer duration, and it involved feelings of sadness, guilt, remorse and frustration [11]. Hasani et al. showed that nurses feel guilt, conflict, and discomfort and blame when they have troubled conscience [12]. These symptoms are the consequence of troubled conscience and create psychological problems for nurses, evidence has shown that psychological problems reduce the occupational health of nurses and the quality of nursing care [13].

Conscience as a moral cornerstone is influenced by complex situations [5, 14] and in the ICU there are many situations that can affect the conscience of nurses and cause troubled conscience in them. For example, Jodaki et al. state that nurses in ICU are very prone to conflict of conscience due to the fact that they are placed in a complex care context [1]. The conflict of conscience can potentially lead to the troubled conscience in ICU nurses. Unfortunately, despite the importance of the concept of troubled conscience and its consequences and due to the frequency of ethics dilemma and stressful situations in ICU [15] no research has been done in ICU context of Iran in this field. Therefore, this research was done with the aim of identify the factors leading to troubled conscience and its consequences in ICU nurses of Iran.

Methods

Design

We used the qualitative research method to answer our research question. Qualitative content analysis methodology is one of the types of qualitative research methods that are carried out in different methods. Conventional content analysis is an inductive method in which you develop codes, categories, and themes from textual data and this research method, the explicit and implicit concepts that exist within the participants' statements are identified and then explained by summarizing and classifying them. Content analysis with conventional approach is done in different methods. In this study, The Graneheim and Lundman 2020 method was used to analyze the data [15].

Setting and participants

This research was conducted in ICU of hospitals affiliated to Tehran University of Medical Science (TUMS). Participants were nurses working in the ICU and they were selected in six ICUs from four hospitals of TUMS. Inclusion criteria included nurses had a bachelor's degree in nursing or higher education who had at least 6 months of work experience in the ICU and were willing to participate in the study were purposefully selected for interview. The exclusion criteria included the participant's

unwillingness to continue the interview and the interruption of the interview for any reason. Snowball and purposeful sampling were used to select the participants. We tried to achieve maximum variation in selecting the participants from both women and men with different educational backgrounds, work shifts and duration of experience. Initially, we used the purposeful sampling method to select the participants, but in some cases and to a limited extent, the snowball sampling method was used to select the participants. The researcher works in the ICU and, according to his experience in this context, in some cases, nurses usually knew better about their colleague's troubled conscience. In this case, snowball sampling was used to select the best participant who had key experience of the concept of a troubled conscience. The researcher explained the study method and objectives to the participants and those who agreed were invited to participate in the study. Place and time of the interviews were determined and agreed upon by the researcher and the participants.

Data collection

Semi-structured and face-to-face interviews were used to collect the data. At the beginning of each interview, the researcher introduced himself to the participants and explained the study objectives and then, questions related to the phenomenon under study were asked. Open, exploratory and in-depth questions were also used according to the participant's responses. Most interviews were conducted in the hospital's staff room before the start of working shift. Following 20 interviews with 18 participants, researchers formed a theoretical understanding of the "perception of troubled conscience" in ICU nurses and data saturation occurred. In other words, in the 19th and 20th interviews, no new knowledge about a troubled conscience was obtained, and it was a repetition of the previous data. The interview with participants 5 and 11 has been repeated, because some dimension of experiences and expression of them needed to be clarified. The average interview time was 47 min. With the participants' consent, their voices were recorded and the data were transcribed and coded immediately after each interview. The interview guide was first used with a few open-ended questions such as: "Can you explain one day of your work experience in the ICU? Have you ever experienced troubled conscience in the ICU? If yes, can you explain it? What caused you to have troubled conscience? What did you experienced after having a troubled conscience? What happened to you?"(supplementary file 1)

Data analysis

Data analysis was performed simultaneously with the data collection, using content analysis method presented by Graneheim and Lundman. This method of data analysis has five steps: In the first step, interviews are typed verbatim immediately after each interview. In the second step, each interview text is read several times to determine semantic units. In the third step, dense and abstract meaning units are coded and similar codes are classified in subcategories. In the fourth step, main categories are formed merging the subcategories with semantic similarities into one class. Finally in the last step, the latent content in the data is explained [15].

Human ethics and consent to participate declarations

This research has the ethics code of Tehran University of Medical Science with the number "IR.TUMS.FNM.REC.1398.192". Consent was obtained from the all participants and they were explained that they can interrupt the interview and withdraw from the study at any time. The participants' voices were recorded during the interview after obtaining their consent. They were also explained that their statements and personal information will remain confidential and the study results will be published without mentioning their names.

Findings

The findings of this study are the results of 20 interviews with 18 nurses working in the ICU. Table 1 shows the demographic characteristics of the participants. Four categories from data extracted. The three categories with the titles of "carelessness, contextual challenge, non-supportive and unpredictable structure" refer to challenging situations in ICU that lead to troubled conscience. The whirlpool of troubled conscience as the last category refers to the consequences of troubled conscience in nurses. (Table 2).

Carelessness

Carelessness failure to give sufficient attention to avoiding harm or errors and it is referred to nurses' conditions such as fatigue during shifts, lack of knowledge, lack of experience and errors in care. In fact, carelessness reflects the negligence of nurses in paying full attention to the complex and critical conditions of the ICU context and lead to the failure of the nurse to good care for patients. The concepts that shape of carelessness ultimately have negative and serious consequences in patient care and nurses reported their experience of these negative consequences as a conflict with their conscience. This conflict of conscience and confused mind ultimately leads to the troubled conscience in ICU nurses.

Participants referred to situations in which, they made mistakes due to fatigue caused by excessive working shifts as well as their lack of knowledge and experience in patient care, and subsequently experienced troubled conscience. In this regard, the participant No. 13 stated that:

Table 1 Demographic characteristics of participants

Number	Gender	Age	Level of Education	Work experience in ICU (Year)	Position
1	Female	32	Bachelor	2	Nurse
2	Female	38	Bachelor	2	Nurse
3	Male	35	Bachelor	4	Nurse
4	Male	33	Master of Science	9	Nurse
5	Female	45	Master of Science	20	Head Nurse
6	Female	32	Bachelor	9	Nurse
7	Female	43	Bachelor	15	Nurse
8	Female	42	Bachelor	13	Head Nurse
9	Male	48	Bachelor	17	Nurse
10	Male	52	Bachelor	28	Supervisor
11	Male	28	Bachelor	1	Nurse
12	Female	31	Bachelor	3	Nurse
13	Female	30	Master of Science	6	Nurse
14	Male	33	Bachelor	9	Nurse
15	Male	33	Master of Science	5	Nurse
16	Female	31	Bachelor	4	Nurse
17	Female	41	Bachelor	13	Supervisor
18	Female	58	Bachelor	30	Supervisor

Table 2 Troubled conscience in ICU nurses

Categories	Subcategories
Carelessness	Fatigue
	Lack of experience
	Lack of knowledge
	Error in care
Contextual challenges	Missed and skip a series of patient cares
	Painful procedures on patients
	cover up
	long-term of patient treatment
	Ethics dilemmas
	Advanced equipment and treatment
Non-supportive and unpredictable structure	Low hospital resources
	Improper organizational culture and atmosphere
	Mismanagement
	Out of control events
whirlpool of troubled conscience	Annoying feelings
	Psychological changes
	Behavioral changes

"When I was transferring a COVID-19 patient to the radiology department, I noticed that his oxygen level is declining and the oxygen cylinder is empty. The patient critically required oxygen. I started to transfer him quickly for reaching an oxygen cylinder there, but he underwent a respiratory arrest. I had not checked the cylinder and I was careless."

Participant No. 11 considered lack of knowledge and inexperience as factor that leads to errors in patient care and exacerbated the sense of troubled conscience in the participants. *"In my first year of work, I was sent to ICU, where a patient with high blood pressure and heart rate of 90 bpm needed labetalol. I didn't know it had to be injected slowly. I did it fast and he got bradycardia so he needed atropine. I felt guilty for my ignorance and inexperience. I thought I couldn't forgive myself if he died."*

Contextual challenges

In this categories participant stated that they do not have enough time for quality of patient care due to the high workload and in many situations do not provide important care for patients who require critical care. They stated that heavy work load, staff shortage and lack of time ultimately lead to missed and skip a series of patient cares as well as missed routine cares, and these cases intensify the troubled conscience in them. Participant No. 15 stated: *"Patients will have surgery today and go to the ward today or tomorrow, then new patients will come right away. Heavy workload and staff shortage in ICU make me lack time to care for patients properly. So I skip some patient cares."*

Participant No. 12 stated, at the peak of ICU crowding, routine care may not be provided due to lack of time and

high workload and this factors that cause troubled conscience. *"Sometimes I fed patients too fast and later saw they didn't eat. It usually happened in busy times and I forgot to feed them. Missing the patient's routine care in ICU crowding hurts my conscience."*

For some reason nurses in the ICU are in a situation of cover up. For example, participants referred to the patient's unconsciousness, patient dependency to nurses and absence of the patient's family in ICU and they admitted these factors in many causes exacerbated the nurses' troubled conscience. For example, the participants stated that performing a painful procedure without anesthesia for patients with a low level of consciousness and concealing or cover up the procedures when the procedures were not done well or an error occurred are situations that lead to a troubled conscience in the participants. In this regard, participant No. 8 stated: *"ICU patients are often unconscious and alone, so no one sees what you do. The ICU nurse must be very committed and conscientious. Sometimes, patient care is delayed or invasive procedure is done without anesthesia. These things prick my conscience."*

Participant No.15 state the difference between the ICUs and other ward of hospital and mention that cover up in ICU, it might happen. *"Most of nursing critical care are not assessed and I can write what I didn't do. For example, the patient is not conscious to ask me to respect his privacy and his family is not there to tell me what to do. It's me, the patient, and my conscience. When I see the same thing from my colleagues, I feel guilty for a long time."*

Participants mentioned the long-term hospitalization and treatment of patients in the ICU can be case of troubled conscience. Participant No. 17 states that *"Many patients stay in ICU for a long time and their unclear conditions pains me. I see the suffering of these patients every day. They are at the end of their lives and I feel conscience pain when I see they suffer every day."*

Participants identified resuscitation or non-resuscitation of dying patients, end-of-life care, invasive treatment and futile care of patients as ethical challenges and dilemmas in ICU, which in many cases lead to troubled conscience. Participant No. 3 stated: *"There is no uniformity in caring for end-stage patients. A nurse gives them their medicines and cares for them. Nurses don't inject expensive and rare drugs like albumin and meropenem into them, arguing that these drugs should be used for patients who have more chance to survive. I struggle with my conscience when I see such behaviors. There must indeed be an agreement between the physician and the nurse, but physicians shouldn't prescribe unnecessary expensive drugs for these patients."*

The advanced equipment and treatment that exist in ICU are other factors that exacerbated the nurses' troubled conscience according to the participant's statement. Participant No. 16 stated: *"There are many treatment methods in ICU, like mechanical ventilation, dialysis, drains, ECMO, PET, CRRT, and more. Some of these only keep the patient alive and are not life-saving. For example, ECMO for a patient with heart and lung failure doesn't help to save or cure him/her. These advanced treatments only delay the death and increase the suffering."*

Non-supportive and unpredictable structure

Non-supportive refers to management style, culture and atmosphere in ICU and hospital, limited hospital resources like low hospital budget which creates the conditions for shaping a troubled conscience in the participants. These factors create an environment where the nurse feels unsupported and must face challenges alone. In this subcategory, non-supportive factors along with other factors such as out-of-control events that occur due to organizational and management failures lead to enhancement of dangerous conditions of ICU and create an unsupportive and unpredictable structure which effects of nurse's conscience as a moral asset and lead to a troubled conscience in them.

Regarding limited hospital resources sometimes patients need advanced medical procedures such as vascular surgery, orthopedic surgery, Percutaneous Coronary Intervention and but they are admitted to a non-specialized hospital that it has limited resources. These patients, who are often transferred to the nearest (often non-specialized) hospital by an EMS, contribute to the nurses' troubled conscience. Participant No. 10, who was an ICU supervisor, pointed to the poor medical resources of the hospital lead to a torment of his conscience.

"The patient needed an urgent PCI and I felt helpless to do anything for him then. We did everything, but he died. I thought if he had gone to a better hospital, he could be alive now."

Participants state that attention to the organization's income and disregard for patients' rights as the result of a negative organizational culture and atmosphere created by conflict of interest, which puts nurses in a position of troubled conscience. Participant No. 17 stated: *"Sometimes, patients in ICU don't need critical care and are there just to make more money for the organization. These are against my conscience as a nurse. The organization is such that you can't oppose anything, and if you do, you will face challenges."*

Participants also stated that, they were sometimes unable to defend patient's rights against a more senior colleague. This organizational culture and atmosphere are the cause of nurses' troubled conscience. Participant No. 1 stated that: *"I had a troubled conscience because of*

my colleague's mistake in patient care, but I couldn't do anything. The atmosphere here is such that reporting the errors of senior colleagues doesn't help, but may get you in trouble, and sometimes you will be called a snitch."

Participants also referred to inability of nursing management to prevent errors in ICU, and the lack of proper error reporting system as factors that lead to troubled conscience in nurses. Participant No. 9 stated: *"We make mistakes and they happen. But the atmosphere here is such that I won't report errors to the head nurse because I feel that it doesn't help or solve the problem. They tell everyone and I will be judged negatively."*

Participants criticized the management's response to the error reporting of staff and referred to the harsh policies and punitive behavior towards the offender. They considered them as factors that discourage them to reporting errors. Participant No. 16 referred to incorrect management methods in error reporting as factors that cause troubled conscience especially when observing the negligence of colleagues. *"Our head nurse has a notebook and records the colleagues' errors, based on which she considers rewards and punishments for the staff. She often punishes the offender nurse with fewer benefits, more shifts, and disagreements with holidays. This causes more secrecy and troubled conscience for me."*

Out of control events such as absent of co-workers and challenge of providing care for patients with less staff and not being supported by the nursing management in this situation, as well as equipment breakdowns and power cuts and decrease the central oxygen pressure are cases that created an uncontrollable and unpredictable environment, and the nurse's conscience is affected in this context. Participant No. 17 stated that during the peak of Covid-19 pandemic, when there was an urgent need for electricity and oxygen, the hospital ICU was frequently cut off the power and the patient's central oxygen pressure was low.

"Due to a problem in the hospital's electricity system, the power was often cut off. All ICU devices work with electricity. The power cuts off here and the emergency power comes on too late. Meanwhile, the alarms, worry about patients' hypoxia, and the shutdown of devices torment my conscience."

Whirlpool of troubled conscience

The whirlpool of troubled conscience was identified by nurses as bitter experiences of troubled conscience and also as a consequence of troubled conscience. These experiences refer to the painful and negative emotions with psychological/behavioral changes that result from a troubled conscience. Painful and negative emotions are caused by feelings of guilt, fear, sadness and helplessness. These feelings bring with them constant psychological and behavioral changes such as fretfulness, confused mind, nightmares and walking and talking to oneself. Participant No. 12 in this regard stated that, he has suffered a troubled conscience due to her mistake in patient care which has led to feelings of guilt and sadness. *"…" After that incident, I was tormented by my conscience for a long time. I felt guilty and upset in my heart because of the mistake I made in patient care."*

Participant No. 6 shared experiences that indicated fear following troubled conscience. He was tormented and moved away from that position, because the physician doing the invasive procedure a patient without the use of local anesthesia.

"The patient needed a chest tube. I was with the physician as a nurse and saw he didn't use local anesthesia while inserting it. I saw the patient's hemodynamic indexes changed and he suffered from pain. After that, I'm really scared of the same situation."

Participant No. 16 talked about the nightmares caused by the troubled conscience and stated that, at times when the patient's treatment and care do not meet the required standard, he experiences nightmares that deprives him of a good night sleep.

"Sometimes, an error happens in the caregiving process, or the care is not standard enough. Those things make me have nightmares and lose good sleep."

In addition to psychological consequences, troubled conscience also caused behavioral changes among nurses. These changes were in the form of walking and talking to oneself. Participant No. 15, for example, stated that:

"Sometimes, I feel guilty after work and I walk the whole or part of the way back home, during which I usually think about the day's events and the shortcomings at work. These hurt my conscience. Once, I was having such thoughts while walking, and then realized I was talking to myself. Of course, I tried to reduce the negative burden of conscience by walking."

Discussion

Our study provides new knowledge about the nurses' perception of a troubled conscience in the ICU and the consequences of it. Munkeby et al. (2023) revealed that the inability to fulfill work tasks and shortage of experience, time, and staff can cause troubled conscience [11]. Mazaheri et al. (2018) showed that not being a good and caring person causes troubled conscience. They defined a good person as someone who performs tasks accurately and completely [16]. Jodaki et al. say that nurses in ICU have unlimited efforts in caretaking as the path to a clear conscience and try to perform their tasks in the best way to prevent of troubled conscience [17]. In this study, error in care was a factor that affected nurses' conscience and composure. Medical and nursing errors are a serious and common problem in the ICU and have been stated as a major global concern [18] since they threaten

patient safety, cause troubled conscience, and negatively affect nurses' health status [10]. Munkeby et al. (2023) suggest that nurses should talk about cases and situations that cause a troubled conscience [11], Openness and dialogue about the occurrence of errors and how to achieve professional values are important for individual nurses' health as well as the quality of nursing care.

In the category of contextual challenges, skipping patient care is another cause of troubled conscience. Jasemi et al. (2019) considered workload as a factor affecting conscience function and acting against it [19]. Acting against conscience causes troubled conscience in nurses. In our study, missing routine care and focusing on vital care due to heavy workload and staff shortage were shown as factors leading to a troubled conscience. Najafi et al. (2021) stated that living in limbo, moral conflict, and troubled existence were consequences of missed nursing care among postgraduate students [20]. Stenlund & Strandberg (2021) demonstrated that the lack of time to deliver better patient care and prioritize primary care led to troubled conscience in ICU nurses [21]. Ericson Lidman and Strandberg suggest that teamwork, time management, and share and reflect on challenging situations that can generate troubled conscience are important in coping with troubled conscience [22]. Therefore, encouraging nurses to talk about situations that cause a troubled conscience and providing them with the necessary training on time management in the ICU can be effective in preventing troubled conscience in ICU nurses.

Painful procedures on patients and cover-ups in ICU constitute other factors causing troubled conscience. ICU has a unique context; patients often have a low level of consciousness and various invasive procedures are performed on patients [23]. These procedures are sometimes without anesthesia and analgesic, and it is annoying for nurse's conscience who are placed in these situations. For example, Ford and Austin (2018) reported that unforgettable conflict with pain and suffering is a creating factor of conscience conflict in NICU nurses [8]. The lack of error reporting and cover-up were other causes of troubled conscience among nurses. When errors are not reported, a cover-up is created; system problems remain unresolved; and ethical and therapeutic decisions can be negatively affected [24]. It has been also shown that health professionals do not usually report errors and do cover-up due to reasons such as fear of punishment and stigma, feelings of insecurity, and lack of feedback [24, 25]. In our study, these factors are consequences of troubled conscience in nurses and as it was mentioned, they can occur due to the lack of error reporting and cover-up in ICU [26]. Peyrovi et al. mention that the barriers of reporting nursing errors in ICU requires an atmosphere and culture based on mutual trust between nurses and managers in which transparency and impartiality prevail [27]. Also, in order to overcome the cover-up, should be created to maintain anonymity in error reporting systems and provide conditions that error reporting is far from any punishment.

The existence of advanced medical equipment and treatments as well as an ethical dilemma in the ICU constitute other causing factors of troubled conscience. Grönlund et al. (2011) cited ethical dilemmas as the causing factors of troubled conscience in healthcare workers since they have to make important decisions about patients' death and life in a short time [28]. Moreover, many studies point to the unique context of ICU and its influence on nurses as a cause of trouble and ethical challenge for them. For example, Moon & Kim (2015) refer to technology-based care, high mortality rate, and patients' low level of consciousness as the normal factors that can cause ICU nurses to face ethical dilemmas and challenges regularly [29] and this challenge can be cause of troubled concsiece and conflict of conscience [1]. Furthermore, 5–20% of ICU patients die before discharge [30]. These conditions often lead to controversial and complex ethical decisions for patients [31] and also put nurses in a state of troubled conscience. Genius & Lipp (2013) found that physicians' insistence on continuing futile care is a factor that causes nurses to have a troubled conscience [32]. Morton and Kirkwood (2009) emphasized the complete dependence of ICU patients on nurses and also considered the existence of advanced medical equipment as one of the reasons for the prolongation of the treatment process and the death of patients [6]. These conditions are so distressing for nurses that Elpern et al. (2005) stated that ICU nurses feel powerless, ineffective, conflicted, and helpless in situations where they need to make moral decisions or when they are in a difficult decision-making dilemma [33]. In these situations, nurses are constantly in a situation of conflict of conscience and try to be safe from the troubled conscience with the unlimited efforts in caretaking and going above and beyond of patient care with the priority of keeping the patient's safety [1, 17]

Subcategory of non-supportive and unpredictable structure includes items low hospital resources, improper organizational culture, mismanagement, and uncontrollable events. We found that organizational climate and mismanagement created a troubled conscience among nurses by leading them to take unconscionable actions. Jalali et al. (2013) showed that organizational factors, managerial problems, and the lack of health facilities negatively affect patient care and create a troubled conscience among nurses [34]. Niinihuhta and Laitila (2022) revealed that destructive leadership styles have a negative relationship with personal accomplishment and occupational well-being and a positive correlation with job stress

among nurses [35]. Lambert et al. (2004) considered factors including work environment, lack of resources, and management style as the causes of troubled conscience in nurses. Therefore, it seems that mismanagement and lack of health resources act as stressors for nurses and cause them to have a troubled conscience [36].

The whirlpool of troubled conscience shows the consequences of troubled conscience in nurses. Ford and Austin showed that nurses often experienced sadness, despair, guilt, and helplessness during the process of a troubled conscience. Other studies have shown that nurses experience guilt, helplessness, weakness, and despair when they sense a troubled conscience. Hasani et al. (2023) showed that nurses' experience of troubled conscience is guilt, conflict, discomfort, and self-blame [37]. According to the findings of this study, factors leading to the troubled conscience create a sense of annoyance and psychological and behavioral changes in ICU nurses. The sense of annoyance and psychological and behavioral changes were defined as feelings of guilt, fear, sadness, helplessness, discomfort, confusion, nightmares, walking, and talking to oneself. The result of these feelings and changes is their negative impact on the quality of nursing care, patient safety, and nurses' state of health. Evidence shows that troubled conscience leads to stress of conscience and negatively affects the personal and professional life of nurses [7, 9]. Therefore, researchers suggest that future research should examine the relationship between a troubled conscience and other aspects of nursing, including quality of nursing care and patient safety. Also, it is necessary to initiate research to develop a tool to measure troubled conscience and to initiate interventions to reduce troubled conscience in ICU nurses.

Limitation

the subject explored was sensitive and revealing the true experiences of ICU nurses was challenging. To overcome this challenge, an attempt was made to gain the trust and interest of the participants by creating a non-judgmental, friendly and comfortable atmosphere in the interviews and ensuring the confidentiality of personal information. In qualitative research, concepts are explained in a specific context and culture, so the generalizability and use of the results of this research in other contexts has always been a big challenge.

Conclusion

Troubled conscience creates annoying feelings for nurses and leads to psychological and behavioral changes in them. These changes are in conflict with the health of nurses and therefore affect the quality of nursing care. In this study the factors leading to troubled conscience in nurses have been identified and this is the first step towards eliminating situations that lead to troubled conscience. Identifying and explaining the factors that cause troubled conscience help healthcare policy makers and health care providers to confront it and manage its causes.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12912-024-02230-2.

Supplementary Material 1

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Author contributions

Study design: MACh, ME; Data collection: KJ; Data analysis: MACh, ME, KJ; Manuscript writing AND editing: KJ, MM, FA. All authors have read and approved the manuscript text.

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Data availability

The data of this manuscript is available from the corresponding author upon a reasonable request.

Declarations

Ethics approval and consent to participate

Before conducting the interviews, the study objectives were explained to the participants, and written informed consent was obtained from each participant and record the interviews in accordance with the Declaration of Helsinki. The participants were assured that their information would be kept confidential, and if they demand, they would be provided with the results of the research. Also, we acknowledge that this project has been reviewed and approved by the Ethics Committee of Tehran University of Medical Sciences with the number "IR.TUMS.FNM.REC.1398.192" and this committee ensuring that all participants were fully informed and provided written consent.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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