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# Establishing Patient Safety in Intensive Care— A Grounded Theory

# -Building Trust-Important for Patient Safety

#### Marie Häggström\*, Malin Rising Holmström, Mats Jong

Department of Nursing Sciences, Mid Sweden University, Sundsvall, Sweden Email: \*marie.haggstrom@miun.se

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#### **Abstract**

Background: The modern intensive care unit (ICU) is a complex and high-risk environment, and even small adverse events and changes may deteriorate the patient's conditions and eventually cause harm. Many factors can potentially be associated within an increased amount of errors, leading to adverse events. Nurses, nurse managers, and other leaders all play important roles in establishing patient safety. Aim: This study aimed to obtain a deeper understanding of leaders' and nurses' main concerns in establishing patient safety in Swedish intensive care units. Method: A grounded theory methodology was used. Data from 15 interviews with leaders and nurses involved in critical care in Sweden were collected, analysed and constant compared. Findings: The main concern in establishing patient safety was promoting quality of care, work engagement, and staffs well-being in strained ICUs. The core category building trust explained how the leaders' and nurses' strove for quality of care and wished a healthy, safe work environment. This is further explained in the categories "Being an accessible and able leader", "Creating knowledge and understanding", and "Establishing collaborative practice". Conclusion: Establishing patient safety in the ICU requires that staffs enjoy going to work, have good work relations, are committed and want to stay at the unit. A healthy, salutogenetic unit with a work environment marked by trust provides a better opportunity to establish patient safety, and various leaders have potential to achieve this.

# **Keywords**

Critical Care, Grounded Theory, Nursing Management, Patient Safety, Organisational Trust

#### 1. Introduction

The term patient safety encompasses systems of patient care, reporting of mistakes,

and initiation of new systems to reduce the risk of errors in patient care [1]. Patient safety is a worldwide concern and with limited resources, recent healthcare systems are facing major challenges in ensuring patient safety, while providing adequate, patient-centred care.

The intensive care unit (ICU) is designed for the seriously ill patients with potentially life-threatening conditions and vital organ failure. High-technology equipment is used and has been identified as a significant source of patient harm, therefore, ICUs provide opportunities to study and implement patient-safety initiative [2]. The modern ICU is a complex and high-risk environment, and even small adverse events and changes may deteriorate the patient's conditions and eventually cause harm.

Healthcare organisations are becoming aware of the importance of transforming organisational culture to improve patient safety, and managers and leaders play a key role in the creation and maintenance of a safe environment. Leadership can be observed in a series of actions exercised by one or more people, which intends to get other people do something and help the organisation achieve its goals [3]. There are different leaders who may play important roles in maintaining patient safety; however, nurse managers may have the highest impact [4]. Critical care nurses (CCNs) also act as leaders in the ICU and are crucial in maintaining patient safety. Nurses often function as the coordinator of multidisciplinary care and are involved in many aspects of patient care, from providing comfort and hygiene to administering drugs, updating medical records, as well as performing some therapeutic and diagnostic procedures [5]. Being a nurse in ICU also entails a huge responsibility in caring for seriously ill patients, and some of the advanced tasks requires accuracy, practice, and precaution [6].

Several studies reported that patient safety requires a culture involving overall security strategies, reporting of adverse events, managers' expectations, organisational learning, and teamwork within the unit, open communication environment, and feedback and communication efficiency [4]. Earlier studies also indicated that nurse staffing levels, workload, and educational levels are related to various patient safety outcome [7]. Leaders in Swedish healthcare have relatively high safety awareness, and their organisations prioritise safety management. However, the study also showed that many leaders express the notion that major changes in the system, including allocation of financial resources, are necessary [8]. Important factors in establishing the current level of patient safety are the root cause and risk analyses, incident reporting, and the Swedish patient safety law [9]. A qualitative study exploring the views of ward nurses on the factors and barriers to ensuring patient safety, indicates that a wide range of factors were at play, such as patient relations, staff competence, teamwork, incident reporting, guidelines/recommendations, and permanent staffing. The authors concluded that further research should be encouraged to achieve a more explicit understanding of the problems and solutions to ensure patient safety [10].

Several studies have been conducted worldwide to investigate various percep-

tions about patient safety and safety culture. Some of them focused at reducing errors in the ICUs, for example, root-cause analysis and different pathways and guidelines. However, fewer studies have used qualitative methodology, although they have the potential to provide a deeper knowledge about what leaders and staff perceive as major problems and concerns to actually maintain safety in ICU. Therefore, this study aimed to obtain a deeper understanding of leaders' and nurses' main concerns in establishing patient safety in Swedish ICUs.

#### 2. Method

#### 2.1. Design

The grounded theory methodology (GT) was used for evaluation based on the objective of this study, which was to acquire a new perspective of the problems previously reported [11]. This theory is influenced by symbolic interactionism, social processes, and pragmatism; the ontological assumptions comprise that meaning is constructed and changed based on the interactions between people and that people act based on the meaning they ascribe in a situation [11] [12].

#### 2.2. Ethical Considerations

The study protocol was approved by the MidSweden University ethical review board (D-number 2016-1012) who determined that the study should be exempted from ethical legislation in Sweden as it does not use highly sensitive data. Moreover, prior to each interview, the participants were verbally informed and given written material about the study. They were informed that the data would be handled confidentially, and that they had the right to withdraw any time.

#### 2.3. Participants and Procedure

Data were collected through individual interviews between May 2016 and March 2017. The participants were initially open sampled, based on various experiences, contrasting milieus and backgrounds [13], selected for convenience because of its location. Later, the preliminary concepts guided what data to collect next in order to develop a theory; i.e. theoretical sampling was used to ensure thicker explanations and to enrich the initial codes and hypotheses concerning how the problem was solved [11]. The total number of participants was 15 (12 women and 3 men) recruited from three ICUs of different hospitals in Sweden. Ten of whom were leaders with different leadership positions (nurse managers, care developers, assistant managers, and medical leader) and five were CCNs. The care developers were CCNs with special assignments related to quality of care, at the specific unit. The selected ICUs were representing various sizes of units and hospitals in Sweden; the first sampled hospital was located in the middle of Sweden with about 3000 employees, the second in the capital of Sweden with 4000 employees, and the third hospital was located in northern Sweden with about 2500 employees. The ICUs were specialised in surgical or general

fields, and the participants' years of experience varied between 1 and 37 years. The nurse manager, who asked the group of nurses if they wanted to participate in the study, assisted the authors in selecting CCNs, and the authors followed up with those who answered affirmatively. Both written and verbal information about the study and confidentiality assurances were given to all participants. Ten interviews was carried out by the first author (MH). Five interviews were conducted by other nurses', as a part of their special education to CCNs, under close supervision of the first author. All interviews were held at the participants' workplaces face-to-face (n = 12) or via the telephone (n = 3) on account of the distance. The durations of the interviews were between 20 and 65 (median, 48) min. The following core questions were the same in all interviews: "Can you describe your unit and your experiences on how you maintain patient safety in the ICU?", "what is the problem in establishing patient safety in your unit?" Follow-up questions, such as "how do you handle that, tell me more, please elaborate", were asked during the interview.

#### 2.4. Analysis

#### **Data Analysis**

Analysis was started immediately after the first interview and continued simultaneously with the next. All interviews were recorded and transcribed into written text and memos were written after each interview to capture ideas and continued as a simultaneous activity through the analysis [11]. The overall coding process involved using the open, line-by-line, and incident-by-incident coding, followed by selective, focused, and theoretical coding. During the open coding, data were broken down into incidents and closely examined for similarity and differences based on the question, "What is the basis of this data?" [14]. The codes were further abstracted, categorised and analysed based on the following question: "What category or property of category does this incident indicate?" The data were constantly compared with other data to explore variations, similarities, and differences. The first and the second author (MH, MRH) wrote and comparable memos comprising their associations, reflections, and ideas after each interview. The analysis was raised to an abstract level by asking "What is really going on in the data?" [15]. The constant comparing analysis of data resulted in one core category that explained most of the participants' main concern with as much variation as possible [14]. The theory was delimited to the core category, which became a guide for further question in the following interviews [15]. The categories were analysed thoroughly, and the relationships between the categories and connections between the core category and the other categories were determined. Data was collected until theoretical saturation was assumed, meaning that data collection continued until new data did not add any new information [13]. The third step of the analysis, theoretical coding, was performed by all authors (MH, MRH, MJ) and used to conceptualise how categories and substantive codes may affect each other and become a hypothesis that can be transformed into a theory [15].

# 3. Findings

#### 3.1. Building Trust

Based on the participants' testimonies and statements, the main concern in establishing patient safety in the ICUs was promoting quality of care, engagement, and well-being in a strained organisation. Establishing patient's safety in the ICU was an ongoing process that involved all personnel, mainly influenced by the leaders of the unit. Both leaders and CCNs expressed that they often needed to handle and resolve complex, unexpected situations. Ensuring patient safety required a unit characterised by overall work engagement, ambition, and self-going staff who maintained high quality of care by adhering to the guidelines. The leaders and the nurses expressed their worry in ensuring patient safety in the strained healthcare setting, specifically threatened by the lack of ordinary staff and high workload. Establishing patient safety, they meant, required staff that enjoyed going to work, had good work relationships, and wanted to stay at the unit.

"People who are truly committed to their job and to the patients are absolutely essential for this unit and for patient safety".—Nurse manager

The core category building trust was essential for quality of care, employee engagement, and well-being in a strained organisation. Trust affected the ability to perform a good job for the patients' best. Building trust, included aspects of the following dimensions: intrapersonal (trust in own ability, confidence), interpersonal (trusting each other), and organisational trust (trust in the organisation). Those aspects are further explained in the categories: Being an accessible and able leader, creating knowledge and understanding, and establishing collaborative practice. According to the participants, trust could result to motivated co-worker, better work engagement with improved adherence to guidelines, enhanced recruitment and employee retention, increased work motivation, improved team collaboration, and willingness to report adverse events. Building trust intended to create comprehensibility, manageability, and meaningfulness for the staff in ICU, and to reduce the vulnerability of staff in their daily work (Table 1). However, the participants stated that building trust was complex and needed time, ability and structure. The participants also expressed their own testimonies about the opposite of trust, that is, distrust, and the following negative effects to patient safety. For example, distrust has been reported to negatively affect the willingness to report adverse events, teamwork, and ability to solve problem in the unit. Absence of clear safety work strategies, invisible leaders without clinical knowledge, hierarchies, and disrespect between team members were described as inhibitors of trust by the participants.

#### 3.2. Being an Accessible and Able Leader

Establishing patient safety and building trust in the ICU required accessible and able leaders. Various leaders should set the tone of openness and shape the practices in the unit.

Table 1. The main concern in establishing patient safety in critical care.

"Promoting quality of care, employee engagement, and well-being in a strained organisation".

Types; Intrapersonal trust, Organisational trust, Interpersonal trust "Building Trust"

Being an accessible and able leader

Creating knowledge and understanding

Establishing collaborative practice

- Setting the standards
- Avoiding unsafe conditions
- Being clinically connected
- Having continuous learning
- Delivering feedback
- Creating involvement
- Being helpful and unafraid to ask for help

Creating comprehensibility, manageability, and meaningfulness-

#### Consequences of trust:

- Decreased vulnerability
- Enhanced recruitment and employee retention
- Increased work motivation
- Improved adherence to guidelines
- Increased willingness to report adverse events
- Improved problem-solving attitudes
- Better team collaboration

#### Inhibitors of trust:

- Invisible leaders
- Leaders with absence of clinical knowledge
- Lack of transparency
- Hierarchies and unfair power relations Leaders not keeping words
- Absence of safety work strategies

#### 3.2.1. Setting the Standards

Many of the participants started their interviews by telling that establishing patient safety starts with clear goals, well-developed routines, and guidelines for everyone to follow. They also meant that the nurse managers should take overall responsibility for the staffs' wellbeing, and for the quality of care. The participants said that various leaders in the unit should set the tone and standards and often shape the unit's practices. The leaders were also setting the tone in the communication and use of power. During the interviews, some negative aspects of leadership were mentioned as part of establishing patient risk. For example, one nurse related a story about a unit negatively affected by hierarchy. One single physician misused his or her power, which really scared novices and others. This kind of leader behaviour, she said, could contribute to distrust and a negative work atmosphere with unsecure staff. However, she also said that this sort of power imbalance was less frequent nowadays; the collaboration and communication between physicians and other healthcare practitioners were mostly respectful and a source for trust. One leader explained that one of her common tasks was to be accessible and listen if a team member had been mistreating each other. If necessary, she tried to show empathy and reduce harm caused by the situation by talking to the involved. She also elaborated about the importance of her own communication openness with the staff at the unit:

"The attitude is very important, we should be straight and clear, but in a friendly way... You have to be kind to others and self-critical of yourself...".

—Assistant nurse manager

# 3.2.2. Avoiding Unsafe Conditions

The participants desired a safe unit to work in; it was also important that their

units had trustworthy safety system and updated routines based on following the best and standard practices. They said that trusting that the leaders should avoid unsafe conditions using effective strategic planning and ability to act, was necessary for patient safety. The leaders meant that they should evaluate the quality of care and create organisational trust by identifying weaknesses that could influence patient safety. One example was to balance high workload with enough and knowledgeable staff. The leaders told that they closely communicated with the physicians regarding the number of patients and those planned for admission. According to the participants, staff shortage and highly stressful workplace often resulted to working overtime and sometimes even double shifts, which could lead to both patient and employee injuries due to lack of focus. Some CCNs said that patient safety could be compromised with staff shortages. One example of this was that the work tasks around the patient must be prioritised, and adherence to guidelines and routines were sometimes compromised. If several deviations from guidelines occurred, the manager of the unit should take action in getting the staff "back on the right track" to avoid potential errors. The high workload and stress in the unit often cause significant problems for the leaders to solve, and one leader said:

"I begin to feel hopeless about the ICU—we just keep getting more and more work to do and we can barely give appropriate care for our patients—soon it will become impossible... This work pace is unsustainable".—Leader

Safety systems that contributed to avoid unsafe conditions were also necessary. One of the participants said:

"It is important to have the latest, safest technical devices... actually some of our devices could be even safer... I mean, the whole purpose for having safety systems is to make it very difficult to commit errors, which is valuable".—Care developer

#### 3.2.3. Being Clinically Connected

The participants told that building trust was enhanced if the leaders were clinically connected and had the insight on what was going on at the unit. Some managers said that they had a daily inspection of the unit, aiming to connect with the staff and to get input about any significant stressors. Clinically competent leaders were appreciated by leaders as by the CCNs who said that clinically connected leaders that had an insight and competence in their own profession, contributed to confidence.

"It is absolutely crucial that you have a manager who has insight and really know the work, does regularly inspections at the unit, and are truly interested in safety".—Assistant nurse manager

The CCNs expressed that during summer, their personal responsibilities and burden were higher because of fewer experienced staff. They also highlighted that leaders should be clinically connected and aware about the risks when implementing new guidelines, for example, less sedated patients could contribute to a potential threat of patient safety if the amount of the staff was not enough.

"...the patients are always ambulatory nowadays, even if they have dialysis machine attached to them, they move and sit, and this really requires a lot of staff".—CCN

## 3.3. Creating Knowledge and Understanding

Creating knowledge and understanding in the ICU was essential to establish trust, for patient safety and for quality of care.

## 3.3.1. Having Continuous Learning

The participants expressed that trusting their own ability and being confident in the capability of doing a good job were necessary for employees' wellbeing and quality of care. Therefore, establishing patient safety required continuous learning and education. This was for some, provided through yearly study days or other internal educational programmes. Some of the units had assigned a specific person responsible for detecting new needs of learning and arrange internal education, for example, a clinical specialist or a care quality developer. The staffs at the unit were mostly motivated with a positive, problem-solving attitude, working in the ICU often meant continuous learning and participating in new and sometimes challenging projects.

"... We always like to participate in different projects and new care routines, because we do not want to work as we always did. And the younger ones in the group are often keen to change; we are a good mix of old and new (staff), which is good in many ways".—Nurse manager

Implementing and using new high-technology devices in the ICU were crucial for patient safety, and sometimes challenging. Some CCNs had experienced situations immediate responsibilities for new devices at the unit, even without adequate training. This, they meant, might lead to an increased risk of patient safety and distrust.

"When it's decided to introduce new technology devices, methods or new ways of working, everyone should be educated and informed before the implementation...".—CCN

#### 3.3.2. Delivering Feedback

One way to determine the unit's outcome was by using the national quality records to measure and evaluate their own quality and patient safety. By delivering feedback concerning the result of the national quality records, the staff could learn and evaluate the quality of care, compared to other. Another important role of the leader in relation to patient safety was collecting and sharing information and feedback regarding different incidents at the unit. According to the participants, learning from mistakes required access to information, and feedback about the result of various written incidents or adverse events.

"... my work is, above all, to handle the adverse events reports and providing feedback to the staff.../ we really try to prevent that the same error will happen again".—Care developer

Reporting adverse events were time consuming; therefore, the nurses wanted to be assured that writing the reports was worth the efforts and time. One leader described that they have regular turnarounds to deliver feedback about adverse events, at least once a month, another unit gave feedback through e-mail. The participants expressed that none or few feedbacks given about the reported adverse events would result to feeling of distrust and also contributed to decreased motivation in writing reports.

"I know adverse events were very much underreported. There are those who find it really tough to write reports about near misses and events..., I cannot really agree with this... Lack of time is probably the most common reason. But when they say it's too difficult—hello, it's not that difficult... but still, much is not reported. And that's serious".—Nurse manager

#### 3.4. Establishing Collaborative Practices

Being a good co-worker influenced the working atmosphere and the intrapersonal trust in the unit, which all influenced the work engagement, job satisfaction, manageability, and especially patient safety.

#### 3.4.1. Creating Involvement

According to the participants, quality focusing and involvement were strongly connected to patient safety and an important factor to establish work engagement. The leaders described how they were creating involvement by forming groups specialised in certain areas, collaborating to develop the care. Examples of this were groups specialised in respiration or dialysis, who were responsible for routines and internal training of the other staff to maintain good quality and patient safety.

"...Our improvement—team's work very well, they become super-users' and train the other staff." Care quality developer

According to several nurses, working in a care team around the patient facilitated involvement and engagement. The communication regarding the patient involves one or more persons responsible for the patient. However, an outspoken desire for an even better team work with interpersonal trust was expressed, which could generate joint responsibility for the working environment and patient safety.

#### 3.4.2. Being Helpful and Unafraid to Ask for Help

To establish patient safety, all employees must be helpful and unafraid to ask for help. The nurses described that a good work environment, with staff that trusted each other and had a good relationship, made it easier to carry out good patient safety duties even though the number of staff were sometimes low. A helpful en-

vironment with trust was also contributing for improved adherence to guidelines. The participants also expressed that having a fully staffed unit, but with a bad practice and distrust, usually led to vulnerability and a threat to patient safety. Working together as teams with positive, problem-solving mind-sets was essential for patient safety.

The participants described that that the leaders and nurses should be helpful when seeing that other colleagues had too much to do. During the interviews, the participants stated that a functional, helpful team in the unit promotes both intra- and interpersonal trust. The CCNs disclosed their own testimonies about teamwork in their unit and how more experienced nurses always helped novices with their work. The nurses knew that if the pressure was high or their competence was not enough, others could and would willingly help. Being unafraid to ask about uncertain things and questions was essential. The participants indicated that people must be unafraid to ask for help; there should be "no stupid questions".

"I think that in allowing an open atmosphere, you can freely talk to each other and ask for help if needed... and so on... That really promotes patient safety, so you should be unafraid to ask for help!" Leader

The leaders pointed out the importance of an open and non-blaming atmosphere in the workplace, where staffs were unafraid to ask for help, acknowledge mistakes, and freely talk about it. One of the participants observed the opposite, where the employees did not acknowledge a mistake that has taken place. This was caused by distrust and being ashamed of their colleagues.

#### 3.5. Discussion of the Findings

The findings in our study demonstrate that the main concern to establish patient safety in the ICU is promoting quality of care, employee engagement, and well-being in a strained organisation. The main concern can be, according to the participants, mainly managed by building trust, which is interpreted as social processes based on the human actions and interactions at the unit that all affected patient's safety. Our findings illustrate that leaders have to show trust and concern for the employees' well-being and their work environment. The leaders expressed serious concerns about keeping up the quality in the future and said that the increased work demands contributed to risks for unhealthy employee and patient safety. Building trust intended to meet the needs of comprehensibility, manageability, and meaningfulness of the staff in their daily work at the ICU.

Leadership and communication are closely related, because they both focus on understanding and influencing others [16]. The concept of trust is a highly complex phenomenon characterised by the individuals, team, and organisation [17]. It can also be described as a psychological state that entails a state of perceived vulnerability or risk derived from individuals' uncertainty regarding the motives, intentions, and prospective actions of the organisation or others on whom they depend [18]. Organisational trust is defined as "a psychological state comprising

willingness to accept vulnerability based on positive expectations of an organisation" [17].

This study's findings were similar with previous research', establishing a shared organisational trust among employees is enhanced with management competence, promoting good relationships among employees, and fair and transparent policies [19]. In concordance with our study, also Firth-Cozens (2004) claims that organisational trust is the key to patient safety, and that increasing organisational trust requires ability, benevolence, and integrity [20]. In this study, the concept of trust includes intrapersonal, interpersonal, and organisational trust dimensions. Trust seems to be related with coherence, meaningfulness, and manageability for the staff in the ICU. Previous research strengthens our findings; trust plays a major role in organisations, is linked to outcome and associated with employee satisfaction [21]. However, building trust in today's strained healthcare seems challenging for the leaders, and it seems as the health sector has much to learn from the wider literature on the behaviours and factors that influence trust [22]. The leader's ability to establish the well-being and a constructive atmosphere involves the implementation of supportive strategies that encompass trust, accountability, and open communication. Upineiks (2003) studied the effective leadership in magnet hospital, designating facilities that have been certified for their excellence in nursing practice. Magnet hospitals are institutions with "better-than-average" measures of nursing job satisfaction and patient outcomes. The magnet nurse leaders who are successful in their roles are identified as supportive, visionary, knowledgeable, visible to clinical nurses, responsive, and able to preserve power and status within the hospital system [23].

Our findings indicate that nurse leaders can shape the outcome of a unit, through his/her value system and enthusiasm for nursing and for nursing workforce. A systematic review aimed to examine the relationships between various styles of leadership and outcomes for the nursing workforce and work environments. Distinctive patterns between relational and task-focused leadership styles and their outcomes to nurses' work environments were observed. Leadership styles that focused on people and relationships were associated with higher nurse job satisfaction, whereas leadership styles focused on tasks were associated with lower nurse job satisfaction [24]. Employees with a manager perceived as "super" have the highest rates of job satisfaction, and the relationship between a creative work atmosphere and job satisfaction was strong [25].

A work environment that fosters an autonomous and professional nursing practice is essential to increase job satisfaction among clinical nurses. Our findings indicate that nurses and other employees in the ICU today sometimes feel vulnerable. Acute and unexpected situations with lack of competent staff contribute to feelings of heavy burden for novices and for experienced nurses. In a study with Canadian nurses, empowered nurses reported higher affective commitment and work satisfaction, and also scored a higher greater organisational trust, which in turn influenced the nurses' attitudes towards their jobs [26].

Nursing theorists have historically claimed that human beings must be

understood within the context of their environment. The context of ICU seems to pre-determine a risk for vulnerability, which is important for leaders' acknowledgment. Nursing theorist [27] suggested that nurses should not only cultivate knowledge and skills but also themselves, which is in line with the new concept of Integrative Nursing (IN). Integrative Nursing focuses on human as whole systems, inseparable from their environments, and a care (and staff interaction) that is person-centred and relationship-based, further enforcing the importance of the context. The healthcare workforce and their need should be cared for in the same manner that they care for patients, stressing the importance that staff must feel acknowledged, competent, and healthy to provide quality care to patients [28]. The main concern forms a positive statement with a salutogenic view of the ICU culture, i.e., seeing and acknowledging the mixture that makes, or has a potential to make, the ICU a positive healthy environment to work and develop in. Antonovsky identified three personal characteristics that prevented people from negative health outcomes in spite of extremely negative circumstances: comprehensibility (ability to assess and understand the situation they are in), meaningfulness (find meaning in a health-promoting direction), and manageability (capacity to do so) [29]. Building trust can be one way to meet the needs of comprehensibility, manageability, and meaningfulness, and enhance work engagement and well-being in the daily work at the ICU.

#### 3.6. Methodological Discussion

Grounded theory was well suited to explain the main concerns in establishing patient safety in the ICU. The participants have been open sampled, meaning that we sought maximum various experiences in the group to obtain descriptions from contrasting milieus and backgrounds [13]. A limitation of this study is that it only includes interviews from 15 leaders and nurses from three different hospitals; however, our findings were strengthened by the result of other studies. The informants and the hospitals were theoretically sampled from different geographical areas to gain cultural variation. This variation of the hospital, the size of the units, and the participants' backgrounds (age, years of experience, and role) were useful, because they had both similar and divergent ways of viewing the problem. In addition to those who participated in the study, three nurse managers from other hospitals were from the beginning invited to participate in the study, but did not respond to the letter of information. The participants talked freely and open during the interviews, which gave rich, qualitative data; it seemed as if the participants thought it was easy to talk about patient safety. There were no differences in length or content between the telephone interviews and the face-to-face interviews.

Based on the classical GT, the literature review has been restrained before the study to optimise the conditions in neutrally analysing the data. The researcher's preconceptions were bridled, which can be explained as a way to hold back preconceptions and to see alternative interpretations. All researchers had wide

experience from qualitative methodology, but only the first author (MH) had personal previous experiences in the ICU. The other authors in the research team (MRH, MJ) were lecturers and experts in other fields of nursing science. This was valuable during the analyses, and each category has been grounded in data rather than rising from the researcher's preconception [13]. A grounded theory must show the following four criteria: fit, workability, relevance, and modifiability [11] [14]. By the thoroughly constant comparison of incidents to concepts, the concepts fit with the incidents they are representing. Quotes have been used in the categories to illustrate how the theory is grounded in data and detailed descriptions enable easy follow-up on data transformation. The findings have workability and relevance and were shown to some of the participants, who said that this data were well-illustrated and explained their reality. The findings in this grounded theory are modifiable, and can be altered with new existing compared data.

#### 4. Conclusion

The findings indicate that leaders in healthcare organisations must work strategically and operationally in building trust and must find ways that increase the trust relationship in the organisation. This requires leaders with social skills such as clinical skills; they must also act in ways that increase the trust relationship in the organisation. A healthy, salutogenetic unit with a work environment marked by trust and work engagement provides better opportunity to establish patient safety.

#### **Conflict of Interest Statement**

The authors declare no conflicts of interest.

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