

## Research article

### The role of pediatric nursing in the provision of quality care in humanitarian settings: a qualitative study in Tonkolili District, Sierra Leone

Josie Gilday<sup>1\*</sup>, Tracey Chantler<sup>2</sup>, Nell Gray<sup>1</sup>, Vicky Treacy-Wong<sup>3</sup>, John Yillia<sup>4</sup>, Abdul Pascal Gbla<sup>5</sup>, Natasha Howard<sup>2</sup>, Beverly Stringer<sup>1</sup>

<sup>1</sup>Médecins Sans Frontières, Chancery Exchange, 10 Furnival St, London EC4A 1AB, UK

<sup>2</sup>London School of Hygiene and Tropical Medicine, Department of Global Health and Development, Tavistock Place, London, WC1H 9SH, United Kingdom.

<sup>3</sup>Médecins Sans Frontières, Naritaweg 10, 1043 BX Amsterdam, Netherlands

<sup>4</sup>MoHS, Magburaka Hospital, Magburaka, Tonkolili District, Sierra Leone

<sup>5</sup>Médecins Sans Frontières, Magburaka, Tonkolili District, Sierra Leone.

#### Abstract

**Purpose:** Evaluate nurses' and caretakers' perspectives of quality care, barriers to its delivery, and its study in a humanitarian setting.

**Methods:** A qualitative study using semi-structured interviews and direct observation was conducted in the pediatric department of Magburaka Hospital, Tonkolili district, Sierra Leone. Interviews were recorded, transcribed, and inductive coding was used to identify prevalent themes. The observation was used to compare and elaborate on interview findings.

**Results:** Three themes emerged holistic care; the nursing community; and organization and systems of care. For caretakers, holistic care related to their child's survival, with quality care described as the availability of free medication, provision for basic needs (food, water, shelter, sanitation), hospital cleanliness, and psychosocial support. For nurses, this involved medication administration, cleanliness, and carrying out nursing tasks (e.g., taking vital signs). Observation revealed caretakers, without nursing involvement, performed the majority of "activities of daily living" (e.g., bathing, toileting). The nursing community describes nursing employment types, attitudes, and how a lack of teamwork impacted quality nursing care. The third theme outlines the importance of organization and systems of care, in which training and a good salary were perceived as prerequisites for quality nursing care, whilst a lack of resources and inadequate operational systems were barriers.

**Conclusion:** Caretakers play an integral role in the delivery of quality care. This and important quality care components outlined by nurses and caretakers identified a patient and family-centered approach could contribute to improving quality nursing care in humanitarian settings.

**Key Words:** Healthcare, humanitarian, Médecins Sans Frontières, nursing care, qualitative, quality-of-care

\*Corresponding author: Josie Gilday, Médecins Sans Frontières, Chancery Exchange, 10 Furnival St, London EC4A 1AB, UK. Email: jlgilday@gmail.com

#### 1. Introduction

Quality of health care is a major global concern. Adverse medical events, including cannula related blood stream infections and catheter-related urinary-tract infections, cause an estimated 43 million injuries yearly in developing countries [1]. Although mainly preventable [2, 3] these adverse medical events fall within the top 20 global causes of disability and death [1]. There is

insufficient evidence about how to measure and improve quality health care in such settings [4-7].

Médecins Sans Frontières Operational Center Amsterdam's (MSF-OCA) strategic plan [8] outlines four components of quality healthcare: (i) safety, (ii) effectiveness, (iii) accessibility, acceptability, and relevance (patient-centeredness), and (iv) cost and efficiency. The World Health Organization (WHO) includes the first three components in its six dimensions of quality care [9]. Scott and Jha [10] reinforce their value by arguing that they focus on improving rather than maintaining the standard of care. In this study, *quality care* is defined as care incorporating these three components: safety, effectiveness, and patient-

#### Access this article online

<http://innovationalpublishers.com/Journal/ijnr>

e-ISSN: 2456-1320

**How to cite this article:** Josie Gilday, Tracey Chantler, Nell Gray et al., The role of pediatric nursing in the provision of quality care in humanitarian settings: a qualitative study in Tonkolili District, Sierra Leone. Int J Nur Res 2018; 4(4): 240-249..

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centeredness. Cost and efficiency were not included, as only after the first three requirements are met can this be evaluated [10].

WHO describes nurses as the backbone of the health care system, spending the most one-to-one time with patients and representing 80% of healthcare providers in developing countries [11, 12]. The Institute of Medicine [13], the International Council of Nursing [14] and the WHO [15] identify nurses as crucial for the provision of quality care, while Hoyt [12, p 110] describes nurses as “the greatest untapped potential for achieving better health quality”.

Prior to the 2014-2015 Ebola outbreak, Sierra Leone had a very low ratio of 3.4 skilled health-workers per 10,000 people, compared to the ideal 25:10,000 [16].

A further 221 healthcare workers died as a direct result of the outbreak [16]. Despite nurses continuing to qualify, the Ministry of Health and Sanitation (MoHS) has been unable to enroll them onto the MoHS payroll since 2011 [17], meaning many nurses work on a voluntary basis.

**Aims and objectives**

This study assessed the role of nursing in the provision of quality health care in humanitarian settings. Our objectives were to explore the perspectives of caretakers of sick children and of nurses regarding the meaning of quality care, and identify the barriers nurses experience in delivering such care. The findings serve to inform strategies for improving the provision of quality health and nursing care in humanitarian settings.

**2. Methods**

**Study design:**

A qualitative study combined semi-structured interviews with caretakers, nurses, and direct observation of nursing care. Observations provided contextual detail about the provision of quality care and allowed comparison with data captured from interviews.

**Theoretical framework:**

Donabedian's model (Figure 1) is frequently used to evaluate the quality of care in healthcare and has been used by MSF to evaluate structure and outcome quality in an MSF hospital in South Sudan [4]. The model describes three interlinking criteria: structure, process, and outcomes [18]. Structure encompasses the

characteristics of the healthcare setting including staffing levels, equipment, and supervision. Process refers to whether patients receive the correct care during all encounters between nurses and patients. Outcomes are characterized by the effect care has on a patient’s health status and satisfaction. Using patients’ perspectives and experiences as an outcome, we used the model to evaluate the quality of nursing care.

Fundamental nursing components were fitted under each of Donabedian's criteria (Figure 1). The structure included nurses' attitudes, experience, and perceptions of quality healthcare, and resources and systems to support care delivery. Processes encompassed actions related to fundamental components of nursing. Outcomes included caretakers’ satisfaction and perspectives of quality of care.

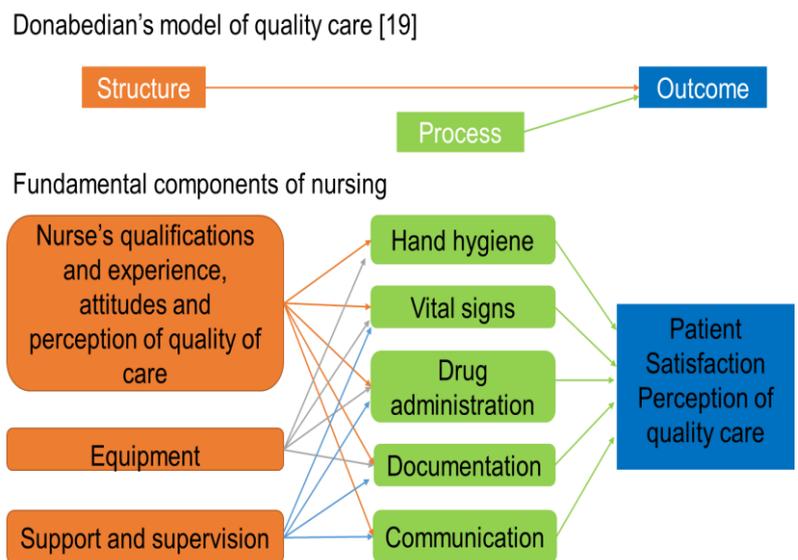


Figure 1: Theoretical Framework: Donabedian’s Model and the Fundamental Components of nursing.

**Data collection:**

**Setting**

The study took place in the pediatric department of the MoHS Magburaka hospital, Tonkolili district, where MSF-OCA supports the provision of maternal and child healthcare. The department comprises of triage for first-line patient assessment and treatment, two general wards, a ward for malnourished children and what staff refers to as an intensive care unit (ICU). The ICU was additionally equipped with oxygen concentrators, pulse-oximeters and had a higher nurse-patient ratio than other wards. Despite MSF-OCA striving for a monthly mortality target of <5% for pediatric wards, the percentage was consistently higher during the study period [20].

**Sample**

All nurses (nurse supervisors, nurses and nursing aids) employed in the pediatric department by either MSF-OCA, MoHS or volunteers (Table 1) and caretakers of pediatric inpatients were recruited to participate in the study. Purposive sampling provided a demographic range relative to age, gender, ethnicity, nursing experience level, and the length of a child’s hospital stay.

Table 1: Nurse positions and remittance

Nurse position	Remittance
Volunteer Nurse/Nurse Aid	Not paid by MoHS/ Received MSF incentive
Nurse Aid	MoHS salary/ MSF incentive
State enrolled community health nurse	MoHS salary/ MSF incentive
State registered nurse (nurse supervisor)	MoHS salary/ MSF incentive
Nurses of all above levels employed solely by MSF	MSF salary

Nurse participants included 5 males and 9 females; 2 nurse supervisors, 10 nurses and 2 nursing aids; with between 1 and 26 years’ nursing experience, who were local or originally from outside the district. Caretaker participants included 1 male and 11 females between the ages of 16 to 35 years, who arrived from surrounding urban and rural areas and had been in the hospital for 1 to 30 days.

**Interviews and observations**

Semi-structured interviews and direct observation were conducted over a two-week period in July 2016. Interviews included questions and prompt related to the fundamental components of nursing, to allow themes to emerge. The experience of the lead investigator, JG, a nurse who had previously worked for MSF-OCA was shared with participants, and to ensure they understood the purpose of the study multiple presentations were conducted to include as many nurses and caretakers as possible. Care was taken to build rapport with participants prior to interviews to help interviewees feel more at ease [21]. At a point when the interviews and observation did not yield new information, data collection ceased. Participants all took part on a voluntary basis and provided informed consent.

JG and a trained translator conducted 26 interviews (14 nurses and 12 caretakers). Interviews took place in a private room adjacent to the pediatric ward. This allowed caretakers to remain proximal to their children or to bring them to the interview and was also a convenient place to interview nurses between shifts.

Nurse interviews were conducted in English and lasted between 15-55 minutes. Caretaker interviews were

conducted in Temne, Krio or English and lasted approximately 20 minutes. Interviews were audio-recorded, transcribed, and translated. JG and the translator quality-checked the transcripts using double-translation of audio files. JG discussed any words or phrases that were unclear with both the translator and transcriber.

To ensure anonymity, only identification codes were used on the informed consent forms, audio files, and transcripts. The translator and transcriber signed a confidentiality agreement.

Observation of nurse participants took place throughout the study period and was documented in field notes.

**Data analysis:**

The analysis followed an inductive approach that allowed themes to emerge naturally from the data. Data analysis commenced during data collection. Using a manual line-by-line coding process, interview transcripts were read and re-read to acquire familiarity with the data. Caretaker and nurse transcripts were coded separately and then codes were compared. During the third read-through, codes were combined to provide initial themes, discrepancies identified, and unexpected findings highlighted. Codes were compared between and within transcripts to acquire an understanding of majority views. For example, the theme holistic survival, for caretakers developed by grouping codes for the provision of free medication, basic needs, and cleanliness. Observations were documented in a spreadsheet to identify key examples of quality care provision and compared with the information obtained during interviews.

JG adopted a reflexive approach to data collection and analysis. She kept a field diary to write about what she was being told in interviews and what she saw in observations. This allowed her to reflect on her assumptions and experience and understand other points of view. For example, following the first four caretaker interviews, free medication emerged as an essential component of quality health care. JG had not thought about the importance of medication being free because she came from a country with a free healthcare system and worked for an organization (MSF-OCA) that provides free healthcare.

**Ethics:**

Ethical approval was provided by the MSc Research Ethics Committee of the London School of Hygiene and Tropical Medicine in the United Kingdom. Local permission for the operational research was provided by the Superintendent of Magburaka Hospital in Sierra

Leone. The MSF-OCA Medical Director classified the study as exempt from requiring MSF Ethical approval.

### Findings

Three themes related to quality care, nursing roles and barriers to care delivery emerged: (i) holistic care, (ii) the nursing community, and (iii) organization and systems of care.

#### **Holistic care:**

Holistic care encompasses the components caretakers and nurses identified as necessary to quality care. Sub-themes include holistic survival, nursing care, and psychosocial support.

*Holistic survival:* Caretakers focused on the survival of their child, themselves and their community, with quality care depending on the provision of free medication, their child's and their own basic needs (e.g. food, water, shelter) being met without cost, the ability to maintain personal hygiene, and hospital cleanliness.

*"Like the cleaning, it is very important because if you stay where the place is not clean you are going to get sick, so you see then when you are sick you don't have medication...your child is going to pass away." Caretaker 12 (C12)*

Free medication was prioritized by caretakers and nurses.

*"...some people because of the money they are going to pay [for medication], their children are dying at home." (C12)*

*"The most important [for quality care], well giving the medication" Nurse 12 (N12)*

Medication was the primary reason caretakers gave for bringing their children to the hospital. For caretakers the quality of nursing care was ascertained by the administration of medication; a nurse who did not administer medication was a poor nurse (C2).

Nurses' shifts revolved around medication administration times, highlighting its significance. Vital signs were only taken when a patient received medication, thereby providing the impression of giving medication was a nurse's primary task. Observations saw nurses carrying out pharmacy tasks, such as counting, ordering and collecting medication for the ward. With no guidelines in the department, it was difficult to determine the expectations of nurses regarding medication administration and taking vital signs.

For caretakers, the availability of free-resources to meet their child's and their own basic needs during their stay in hospital was important.

*"You did not have to suffer for what to eat, they give you food free" (C7)*

Observation of caretakers illustrated that they took care of their child's basic needs (washing, feeding, mobilizing and toileting) with little to no involvement of the nursing staff. As a result, nurses had limited knowledge of whether a patient's basic needs were met. Meeting patients' basic needs were not mentioned by nurses as an important component of quality health or nursing care.

Caretakers and nurses considered cleanliness as important to quality care, in order to prevent the spread of infection and maintain dignity. Observations confirmed the cleanliness of the hospital.

*Nursing care:* Nurses mentioned "taking care" of patients and 'trying one's best' as an important aspect of quality care. This included everyday nursing tasks: taking vital signs and communicating with colleagues and caretakers. Observation highlighted these tasks were performed.

*Psychosocial support:* The importance of the nurse-patient relationship was highlighted, including respect and encouragement. Positive and negative interactions between nurses and caretakers were mentioned as affecting quality nursing care. Respect was significant for caretakers; some reported being shouted at and ignored by nurses, whilst others explained not all nurses conveyed disrespect. Though upset by disrespectful behavior, caretakers expressed it would not prevent them seeking health care for their sick children. Their need for holistic survival was more important than their need to be respected.

*"They will use some insulting statements against you like you are foolish...But I would not stop coming." (C9)*

Nurses did not consider respecting caretakers as important and observation correlated this view. Some nurses spoke politely and listened to patients, while others shouted abruptly from the nursing station.

Nurses and caretakers highlighted the importance of providing encouragement and reassurance.

*"They [nurses] will come to encourage you and makes you feel good" (C3)*

*"I always reassure relatives, because when they come here they are always worried about their loved ones." (N1)*

Though psychosocial support does not feature as a prominent component of quality health care, it appears to be essential for quality nursing care.

**The Nursing Community:**

The second theme explores nursing positions and works on the wards. Sub-themes include nursing roles, teamwork, and attitude.

*Nursing positions:* During the study, there were different nursing positions with different contractual statuses and remuneration [Table 1].

No differences were observed in the tasks carried out by nurses at different levels and their job descriptions were identical. Volunteers explained that they volunteered because they liked the job and did not want to lose their skills.

*"I like the job, not only the money but the job itself"* (N10)

*Teamwork:* Nurses identified teamwork as essential to providing quality nursing care and it was closely linked to nurses' attitudes. Positive experiences of teamwork included being able to request help from or offer help to colleagues. Negative experiences outweighed positive ones and were identified as having a significant influence on whether quality care was provided. Several nurses mentioned that some MoHS nurses did not always come to work.

*"You may be assigned with a MoSH staff, they will not come when you are left alone with critically ill patients will you give a quality care?"* (N5)

Observation during a night shift in the ICU recorded only one nurse and a CHO resuscitating a child. The second ICU nurse, from MoHS, was absent. The ratio of one nurse to six critically ill patients made it impossible for the nurse to provide quality care.

Nurses that did not work as part of the team had a significant effect on the lives of their patients, the quality of nursing care and the motivation of other nurses. Nurses described a lack of commitment from other nurses as 'killing their spirit'. The division appeared to be between nurses who worked hard and those who did not, irrespective of their employer.

*Attitude:* Attitude was a theme discussed regularly and highlighted that some nurses had the "spirit" to work hard. Observation indicated nurses stayed 15-30 minutes late or arrived 15 minutes early to receive handovers not incorporated into the roster. Motivation, support, and leadership were described as necessary for ensuring nurses kept this "spirit". Nurses explained they needed

support both when working well and when not working well.

*"Nurses need to be encouraged, yes if a nurse does a good thing you need to give the nurse a plus... The area where the person doesn't work well, you say you know what, these days I have noticed something is wrong, what is it?"* (N8)

**Organization and systems of care:**

The final theme explores perceived prerequisites of good nursing care and what nurses identified as barriers to care. Sub-themes include prerequisites of care, a lack of resources and operational systems.

*Prerequisites:* Caretakers and nurses identified training and good salaries as prerequisites to quality nursing care. Several caretakers mentioned the importance of training and increasing nurse salaries. In comparison, the majority of nurses cited training and only some cited salary increases as important to their ability to provide quality care. Caretakers and nurses both highlighted the link between training and providing quality care. Observation indicated the perceived value of training to nurses, with many staying after shifts or attending training during their time-off with no remuneration.

*"Because if you're trained good, you are going to do a perfect job"* (C6)

*"MSF need to improve my knowledge, need to educate me more for me to provide quality care for the patients"* (N1)

*Resource deficiency:* Both nurses and caretakers noted insufficient human and material resources such as equipment, medication, and nurse staffing levels, affected the provision of quality care. Observation showed stethoscopes and pulse oximeters were unavailable in sufficient numbers and shared between departments, thereby increasing risk of infection.

*"We don't have the strips for the RBS (random blood sugar), you know children normally die from hypoglycemia"* (N14)

Nurse participants regularly advocated for an increase in the number of nurses per shift, highlighting links between nurse-patient ratios and quality care.

*"Because if we have at least some staff to a patient, the nursing care that you render to the patient as a whole will be more effective"* (N13)

Observation showed insufficient nurse-patient ratios in ICU, with two nurses caring for up to eleven patients across three rooms. The triage room often had no

allocated nurse, meaning CHOs would admit patients to the ward who still required initial nursing care such as vital signs, cannulation and medication administration. The pediatric wards were staffed at the minimum of two nurses to twelve patients, meaning if the department was short one nurse it immediately impacted on safe nurse-patient ratios. Nurses also focused on the need to increase the numbers of experienced nurses.

*“They [MSF] should employ experienced nurses ... to run a reputable hospital.” (N2)*

**Operational systems:** Nurses identified a lack of operational systems, defined as maintaining the appropriate quantity and type of equipment and medication on wards, communicating with other wards and CHOs, and support and supervision. Observation highlighted that nurses had to leave the ward to search for equipment, medication or a CHO, and patients requiring care were left unattended.

*“If I’m alone, I leave the patient. I leave, I have no other way.” (N11)*

Supervision was reported as lacking, as was accountability for poor performance.

*“I want you to be punished when you don’t do the work.” (N5)*

The diversity of nursing positions, training levels, and competencies, as well as divided management between MoSH and MSF, meant supervision was a challenge. Nurses highlighted teamwork, encouragement, support, monitoring, and accountability as important aspects of leadership and supervision. Observations outlined that nurse supervisors were absent from the wards, fulfilling administrative tasks, while nurses were carrying out key tasks (e.g. administering medication or taking vital signs) highlighting a lack of support.

One nurse connected lack of resources, nurses' experience, and motivation:

*“We have three determinants for employees to do well: 1, the resources available to allow the employee to do the job, 2, the ability of the person, the training and the experience, 3, the willingness of the individual or group to perform.” (N5)*

Throughout discussions about barriers to delivering quality health and nursing care, no nurse mentioned personal or collective nursing conditions (e.g. having no place to take breaks). The focus remained on barriers to providing better patient care.

#### 4. Discussion

##### Holistic care

These findings indicated that caretakers and nurses recognized the importance of holistic care, defined by Disch [22, p 237] as "caring for patients and their families in a holistic, personalized, relationship-based way that honors their preferences, needs, and values". The caretakers' primary goal was the survival of their child, through the provision of free medication and having their child's and their own basic needs met. This finding differs to results from developed countries where the primary goal of caretakers is to build a relationship and good communication with nurses [23, 24]. Interestingly, nurses in this study did not highlight meeting a patient's basic needs even though this is a fundamental nursing task in nursing models, such as Roper, Logan and Tierney's which is based on the activities of daily living [25].

Caretakers provided care related to the 'activities of daily living' without nurse involvement (Figure 2). Consequently, nurses did not place such activities at the center of care they provided, meaning they had a limited understanding of patients' daily needs and whether they had been met. The roles played by caretakers and nurses meant nurses were not educating, supporting or assisting caretakers in how best to care for and meet their sick child's needs. Thus, nurses were not taking a holistic approach to the provision of care while caretakers highlighted it as an important component of quality healthcare.

Activities of daily living:	
Caretakers carry out:	
	Breathing
	Eating and drinking
	Elimination
	Washing and dressing
	Mobilization
	Working and playing
	Sleeping
Nurses carry out:	
	Maintaining a safe environment
	Communication
	Controlling temperature

Figure 2: Roper, Logan and Tierney's activities of daily living [25]

Similar to Haddad et al's [26] findings, nurses in this study recognized the importance caretakers placed on the provision of medication and considered it to be what caretakers prioritized over all other components of

quality healthcare. During a shift, nurses primarily focused on the administration of medication, narrowing their view and their ability to deliver other care that patient required. Contributing factors included nurses taking on pharmacy tasks (counting, requesting and collecting medication) reducing the time they were able to focus on patients. Studies show that administering medication takes 30 to 40% of a nurse's time, without additional administrative tasks [27, 28]. In humanitarian settings, such task-shifting is common [29, 30].

Nurses' narrow focus, the importance caretakers placed on holistic care and caretakers' integral role in delivering basic care, outlines the need for a more holistic nursing approach. A patient and family-centered nursing model, highlighted by the WHO for the benefits it might offer in a humanitarian setting, would introduce a holistic viewpoint [31]. Patient and family-centered care is an approach to planning and delivery of health care that is grounded in mutually beneficial partnerships among patients, families and healthcare providers [32]. It "acknowledges that families, however, they are defined [in this case as caretakers], are essential to patients' health and well-being and are crucial allies for quality and safety within the health care system" [33, p 5]. In the study setting where there is such a prominent caretaker role which requires technical nursing support, such an approach may help to improve the quality of both nursing and healthcare [34].

#### **The Nursing community:**

Despite poor pay and demotivating conditions (e.g., high mortality rates), nurses in this study continued to demonstrate motivation and dedication, suggesting that improving their ability to work as a team could improve motivation. Kalisch and Lee [35] found that teamwork fostered the development of mutual support, created collective accountability, increased both patient and nurse satisfaction, and contributed to better quality nursing care. Lack of teamwork and motivation was found, in this study and others, to compromise patient safety, affect nurse attitudes, and become a barrier to providing quality care [36, 37]. Teamwork requires leadership [38], which was cited by nurses as one of the organizational issues necessary to improve their delivery of quality care. Similar to Stewart and Usher's [39] findings, removing nurse leaders from wards to manage bureaucratic work prevented them from providing the necessary leadership to support and motivate their nurses.

#### **Importance of adequate resources and functioning systems:**

Inadequate provision of resources and weak communication and operational systems demotivated nurses in this study and affected the provision of care and patient safety. The lack of resources was a structural

issue whereas weaknesses in the operational process (e.g., an unprepared resuscitation trolley in the ICU) were indicative of poor management. Kotagal et al [6] states adequate resources (e.g. human resources, supplies, and knowledge) should be available before the quality of care can improve. Poorly organized systems lead to adverse events and negatively impact nurses' motivation [3, 40]. The findings emphasize similar issues evident in both high and low-income countries, over which nurses themselves have little control.

#### **Implications**

To better support nursing care in humanitarian settings nurse managers responsible for implementation and decision makers that guide policy, require the necessary evidence to change nursing practice in both hospital settings and nursing curriculums.

Nursing care in humanitarian settings is complex to evaluate and the lack of nursing-sensitive indicators and a standard way to assess nursing care makes it difficult. Standard tools to assess the quality of care in low-resource and humanitarian settings are required for baseline and ongoing monitoring. A lack of clarity around a nurse's role and their job description was found in this study and others, to contribute to the difficulty of evaluations [41].

A clear definition of the nurse's role and acknowledgment of the part caretakers' play in providing patient care are necessary for the adaption of a patient and family-centered approach to improve quality of care. The findings of this study point toward policy and management to adapt nursing approaches to include better identification of roles, supervision, and leadership within the nursing hierarchy, promotion of teamwork, effective systems, patient and family-centered care models and the use of standard tools to evaluate and monitor the quality of nursing care.

By providing structure for the development of data collection tools and ensuring all aspects of care were included, the application of Donabedian's model proved beneficial. It is important to ensure all three criteria are evaluated to understand where the roots of a problem or a solution may lie.

For future studies, the criterion 'outcomes' requires adaptation to ensure it defines what is being evaluated. In this case, the outcome should be the definition used for quality care; patient and family-centeredness, patient safety, and effectiveness (Figure 3). An additional element to Donabedian's model should be added to include 'what is important' to stakeholders involved in that outcome; in this study, they included caretakers, nurses and nurse supervisors (Figure 3). Future studies could benefit from including patients, nurse managers, senior managers and the organization involved, such as MSF.

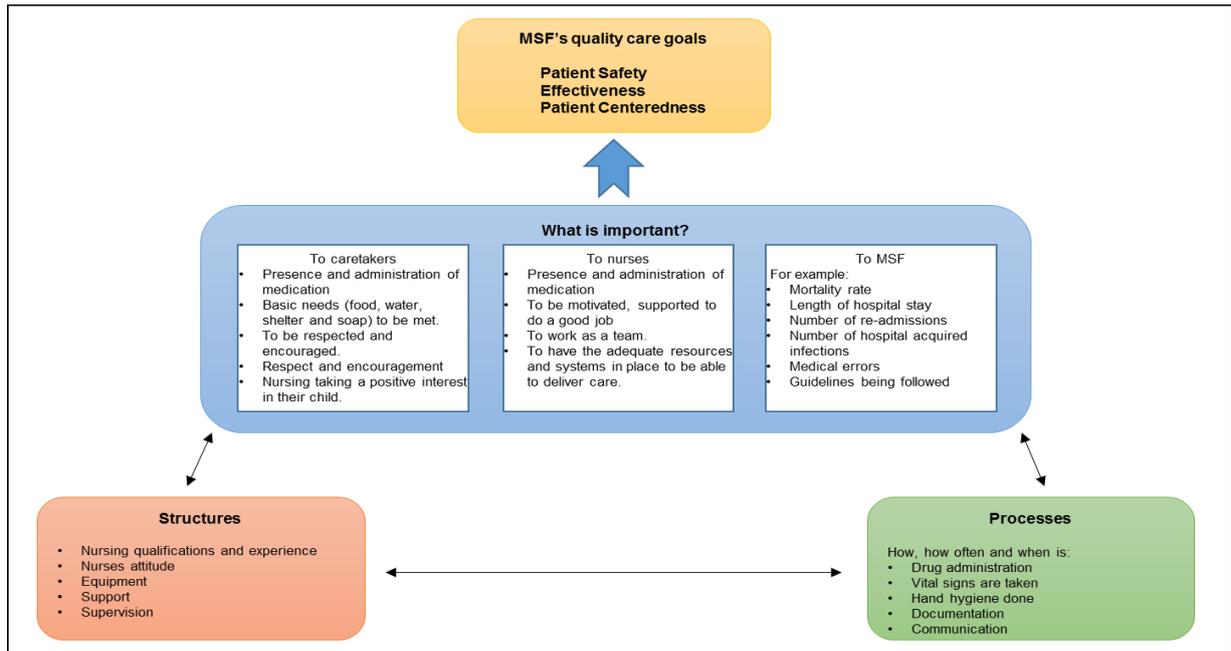


Figure 3: Adaptation of Donabedian's quality care model

**Limitations**

Several limitations should be considered. First, the need for a translator during caretaker interviews may have distorted questions and/or answers. This was minimized by careful recruitment and training of the translator. Second, potential social desirability bias, interview bias, and Hawthorn effect were minimized by working to build a rapport with participants, reviewing interview questions and methods with BS, and using a reflective approach to continuously improve technique. Third, only caretakers with children in the hospital were interviewed, potentially missing relevant perspectives of those in the community. Fourth, MoHS and MSF-OCA guidelines and policies outlining expectations of nurse and their responsibilities were unavailable, making nursing care difficult to assess. Fifth, operational research in difficult settings is often limited by time and the two-week data collection period limited the amount of data collected. Finally, concepts are not generalizable but could be transferable to similar humanitarian settings.

**Conclusion**

By examining caretakers' and nurses' perspectives this study contributed to a greater understanding of quality health and nursing care from the viewpoints of nurses and caretakers in a humanitarian setting. The importance placed on holistic care identified a patient, and family-centered approach could contribute to providing a better quality of care in humanitarian settings. In this context, several actions needed to improve the quality of nursing care and its impact on the quality of healthcare lay outside the scope of nurses' authority.

**Acknowledgments**

I would like to thank all the caretakers, nurses and the whole Magburaka and Sierra Leone team, as well as the Public Health Department in Amsterdam. I would also like to say a huge thank you to Beverley Stringer and Tracey Chantler for their continuous support throughout the study, Nell Gray for reminding me about what kept me awake at night and Barbara Nasto for editing the manuscript in her free time, without all of you I would have never got this far.

**Funding**

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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