Nurses' Viewpoints on the Quality of Care: A Qualitative Study in Timor-Leste

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Research

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ABSTRACT

Background

Research on quality of care revealed nurse-to-patient ratio and skill mix served as key elements in quality of care. However, those studies were done in countries where nursing workforce had reasonable proportion of professional nurses with bachelor degrees. Findings of these researches may overlook challenges in health system as well as the nature of nursing service in small island low-income countries that has a huge proportion of auxiliary nurses. Working in under-sourced places, nurses in Timor-Leste might have different viewpoints on what aspect contribute to quality of care.

Methods

Focus group discussions (FGDs) were done in 2017, in three districts that included staff nurses and senior nurses from three levels of health care facilities: primary, secondary, and tertiary. Data were analyzed using content analysis method.

Results

Two themes were emerged from the FGDs data: "patients as the center of the service" and "gaps in providing quality of care". Aside from attributes of quality care such as equality, efficiency, and patient-centeredness in the delivery of care, the first theme also

covered the importance of employing nurses' value system in order to uphold quality of care. The second theme included quality care milieu amplifying distinctive factors facing health system in under-resources places. Problems related with facility infrastructure, equipment and supplies, financing, management, and staffing were narrated. While an inadequacy or a deficiency of these factors implies the country's struggles to maintain a functioning health care facility, it incapacitated nurses to improve quality of care.

Conclusions

Compared to nurses in countries with better skill mix, nurses in under-resources places and small island low-income countries face different challenging situations that go beyond nursing realm, forcing nurses to describe quality care uniquely. Findings from this study provide evidence that it is urgent to develop policies of human resources for health (HRH) within the context of the health policies that contributes to professional management of the largest cadre, thus strengthens their ability to improve patient care service.

Keywords: Human resources for health, Skill mix, Nurse' values, Nursing management and leadership, Patient-centeredness, Quality care, Quality care milieu, Small island countries, Staff nurses, Timor-Lest.

Background

The nursing workforce in Timor-Leste exemplifies problem in staffing and skill mix. Nurse assistants, who graduated from high-school nursing course, dominated nursing workforce (91%)[1]. They are known as technical nurses or auxiliary nurses who work

as staff nurses in health care facilities [2]. About 9% of nursing workforce comprised professional nurses, mostly graduated from diploma three in nursing, a three-year course after high school. A very small percentage of these professional nurses graduated from bachelor and masteral degrees in nursing (0.1%) [1]. This poor proportion of professional nurses illustrates a skill mix imbalance in nursing workforce and a trivial ratio of professional nurse-to-patient in the hospitals and other healthcare facilities. Nationally, the ratio of nurse-to-1, 000 population is very low (0.9/1,000)[3] and it contributes to the low density of skilled healthcare workers (physicians, nurses, and midwives) per 1,000 population in the country, which is below the minimum threshold of 2.28 [4]. This ratio implies a staffing inadequacy in particular and health system inefficiency in general [5—8]. It is continuously reported in the literature that nurse-to-patient ratio and skill mix serve as key elements of the quality of care. These two elements link with variation in healthcare services, adverse events, and patient outcomes [5,9—10].

The quality of healthcare service becomes a great concern to population of Timor-Leste. Information regarding service insufficiency and low quality of care, for example a negligence and deficiency in the provision of medications and oxygen has been frequently reported [11]. In addition, it was also found in the literature about nurses' undesirable attitude toward patients including impoliteness, disrespect, and unfairness [12]. These concerns may suggest that it is not impossible that nursing service becomes a stumbling block to quality care improvement. Given that nurses comprise 45% of healthcare providers [3], it is imperative that nurses in Timor-Leste become the backbone of health care system. Many small island low-income countries and under-resources places often face similar condition [13]. However, serving as the backbone of

health care system comes with additional tasks. Frequently, these nurses are obliged to take extended roles without proper preparation and enough organizational support [14-16]. Consequently, their performance accounts for a substantial amount of overall quality of healthcare service. Thus, improving quality of care must not only include efforts to distribute nurses in the country equally but also to empower them to be qualified and motivated nurses and to improve nurses' performance in general [17]. Nonetheless, it may take a longer time for Timor-Leste to restore its health system and to improve the quality of care. A prolong period of conflict has impacted health workers development that affected nurses' competence and performance [18]. The low performance of nurses might impede progress toward achieving universal health coverage (UHC) encompassed by Sustainable Development Goals (SDGs). Hence, escalating chances for nurses to increase their performance will lead to quality of care improvement and better outcomes thereby meeting target 3.8 on UHC that underlines access to quality care [19].

Since 2001, measuring quality of care has been directed toward better outcomes [20] but the key measures of quality of care have been different in many countries. Most of the studies that measure quality of care have used Donabedian's SPO Framework that links three quality care dimensions namely Structure (S), Process (P), and Outcomes (O) [21—22]. Structure describes the elements of healthcare settings that include health facility infrastructure, management, and staffing. Process describes an interaction between healthcare providers and patients through service delivery that includes technical quality and patient experience. Outcomes include changes as a result of activity of care that include patient satisfaction, return visits, and health outcomes [22]. Globally, there is a trend in identifying the associations between structural (i.e., staffing)

and outcome indicators (i.e., mortality rates of a certain illness)[23]. In high-income countries, many studies have inclined toward measuring sensitive patient outcomes, including hospital readmission [21], morbidity and mortality rates such as decubitus ulcer, pneumonia, and postoperative pulmonary emboli, and acute myocardial infarction [23—24]. But, in middle and low-income countries, most studies described and measured the dimensions of structure that include staffing in nursing in addition to facilities and supplies as part of an effort to achieve service readiness and sufficiency [21].

Studies on quality of care that focused on nursing staff have common understandings. A study done in countries with undersupplied healthcare providers underlined two distinctive elements of staffing that link to quality of care: experience and sufficient number of staff [25]. Some studies provided evidence that better education qualification of nurses, higher skill mix proportion, and better patient-to-nurse staffing ratio were associated with low hospital mortality and outcomes improvement [9,26—28]. However, these studies were done in countries with better overall mix of nursing skill; at least 10% of nursing workforce with bachelor degree and hospital nurse skill mix above 40%. Therefore, findings from these studies may not capture staffing related problems in countries with very poor mix of nursing skill. Little is known about quality of care where nursing profession is dominated by an immense proportion of auxiliary nurses, indicating a meager nursing skill mix. Given the vast number of these nurses and the nature of nurses' roles in challenging circumstances, the auxiliary nurses may have exposed to a various kind of activities in health care deliveries, implying that they may have different views on quality of care. Understanding nurses' perspective on quality of care in such setting offers an alternative to comprehend contextual issues and situations

across healthcare facilities and health system for better approach toward achieving quality of care and UHC.

Methods

Aim and Study design

This study was designed to use descriptive qualitative utilizing focus group discussions (FGDs) because FGD approach compliments descriptive qualitative method in describing of a real life phenomenon [29—31]. Using FGDs allow researchers to capture diverse viewpoints from participants and to obtain rich amount of data, the results of which help in expanding current knowledge on service provision [32]. This study aimed to explore staff nurses' roles and their contributions to quality of health service. This article covers the latest one, in which to answer a broad-based question: "What aspects contribute to the quality of care provided by staff nurses?" Purposive sampling method was utilized to recruit FGDs Participants.

Setting and Participant

The staff nurses and senior nurses who worked in three healthcare facilities were recruited. These three healthcare facilities included a national hospital, a regional hospital, and a community health center (CHC). The three Districts (out of 13 districts) in which these healthcare facilities located were chosen based on the density of nursing workforce and the availability of healthcare facilities. The first district where national hospital was located was chosen because of its tertiary healthcare facility that served as central referral with the highest density of nursing workforce. The second district was one among five districts that served as regional referral hospital with high density of nursing workforce. The third district, although it was not considered as the most remote

district, was one among many districts without hospital and had the lowest concentration of nurses.

The participants were chosen based on their workplace and were categorized into two groups, staff nurses and senior nurses. The staff nurses, also known as auxiliary nurses, were defined as nurses who had worked continuously at least a year at the same healthcare facilities, graduated from high school level of nursing course, and without management responsibilities. The criteria for senior nurses included nurses with management responsibilities, graduated at least from diploma three in nursing, and continuously working as a manager for at least a year at the same healthcare facility.

Instruments, procedures, and ethical consideration

The guide questions were prepared for each group of nurses: staff nurses and senior nurses. The guide questions for each group had the same content, however they were stated especially to suit the role of each group. For example, a guide question for staff nurses stated, "In your opinion, what is quality of care?" For senior nurses this question was stated: "In your opinion, what is quality of care according to you staff nurses?" The same open-ended questions were used for each group of nurses from three different healthcare facilities. Probes were used to clarify information provided by FGDs participants. The guide questions that were written in Indonesia were translated to Tetum and then were translated back to Indonesia by different persons to ensure that its meaning and semantics were kept [33]. All researchers spoke the two languages actively. These two languages were used to minimize barriers in communication and in interpretation of the data between the consultant and research team.

After the Human Right Ethics Committee of Ministry of Health approved the study's proposal, a pilot testing was held before initiating the actual data collection procedures. In pilot testing, nurses who met the same criteria for this study but worked in a district that was not chosen for this study were included. The result from pilot testing was used to revise guide questions.

Data collection

Procedures for recruitment, informed consent, and FGDs sessions were carried out. A formal letter to the head of healthcare facilities in the chosen districts was sent to help in identifying candidates for each group of nurses. The candidates were chosen purposively based on the criteria for each group of nurses. After that, each candidate was informed about the nature of the study and the reason each candidate was recruited. The candidates, who voluntarily agreed to participate in each FGD, were asked to read an informed consent form before giving their signatures. They were asked to fill in their demographic data form without included their identifying information. The candidates were informed that should a candidate felt uncomfortable, at any time she/he could withdraw from the FGD.

Six FGDs were held in three districts that included 33 participants. In each healthcare facility that located in a district, two FGDs were held, one for the staff nurses and one for the senior nurses. In each FGD, a lead researcher was assisted by at least a member of research team. Each FGD lasted for not more than two hours. All FGDs were audio-recorded and data were transcribed verbatim right after each FGD's session. All data were collected over a 2-month period in 2017. Thirty-three participants that were recruited had an average of 42 years of age. The majority of the participants were males

(51,52%). A majority of staff nurses worked at National hospital (58. 33%) while a majority of senior nurses worked at CHC (58.33%). Staff nurses worked longer than senior nurses with an average of 18 years and 4 years respectively.

Data analysis

Data from FGDs were analyzed using content analysis method [30,34—36]. All FGDs data were transcribed and then all transcriptions were rechecked by comparing with the audio-recorded data. To maintain data accuracy, two different persons translated each transcription into Indonesia. After that, one of the research members together with the consultant went through a translated data by reading each paragraph and then compared it with the original transcription. Some errors and omission of data in the original transcriptions and the translated ones were identified and corrected. All transcriptions were treated as a whole data set. The translated data were read through for at least three times before words or phrases that described quality of care were coded. A table was used to organize all the categories in which codes with the corresponding data from transcriptions were included. The codes were reviewed and refined before clustering into categories. Then, categories with similar meanings were organized and grouped into themes.

Data quality assurance

Rigor of this study was maintained through several ways. First, multiple sources of data were used. Data were collected from different perspectives: from two different groups of nurses who worked in three different health facilities [36]. The viewpoints between the senior nurse groups and the staff nurse groups were compared to corroborate the information. Second, discussions and reflections were done continuously before data

collection and during analysis procedures [37—38]. The guide questions were developed followed by role-play and discussion sessions. Reflections and discussions were continued during pilot testing and actual data collection. Third, during data analysis, notes were compared and discussed before labeling and sorting out codes, categories, and themes [39—40]. Fourth, transcriptions and translated data were read at least three times to comprehend the meaning of it [35,41]. Fifth, comments from participants and experts were sought [36]. Some participants were asked to comment on the data interpretation and analysis. They confirmed that findings from this study portrayed the information they provided in FGDs. The findings of this study were presented in a forum that was attended by some nursing educators and experts, administrators in health care service, and participants. In this forum, views and feedbacks on the analysis of data and findings were solicited from the attendees in which they emphasized that the findings were reasonable to nursing practice and health care service in Timor-Leste.

Results

Two themes associated with quality of care emerged from our FGDs data: patients as the center of the service and gaps in providing quality of care.

Patients as the center of the service

Participants of all FGDs voiced a common ground that the patients were the center of their service. Within this theme, there were five categories: patient as family members,

with the patients for 24/7, we are happy when our patients get well, quality of care more than being kind, and medicines are not exclusive to quality of care.

Patients seen as family members

Participants saw their patients as "God's creation human beings" who possess "bio-psycho-spiritual" dimensions (ES3). Providing good quality of care to the patients was seen as a way to worshiping and serving God. Hence, "patients should not be abandoned, we need to serve [them] equally and not based on family relationship, skin colors, or races" (EI1). Participants stated that while showing respect to their patients they treated their patients the way they served their family members. Participants described the following statement: "We came to their beds regularly, we saw the patients as someone older [than us], as younger siblings, elder sisters, elder brothers, or as our uncles" (ES3).

With the patients for 24/7

Participants also conceded that helping their patients get cured was very important because nurses were "always be with the patients for 24 hours a day" (ES2). The good quality of care was also provided to the dying patients with a hope that "the patients will die peacefully" (EI3). In addition, participants who worked at CHC, although not being with patient whole day, they emphasized that the care was not exclusively provided to the sick patients. Nurses at CHC, who usually worked overtime week round, made effort "to improve public health service" (ES1) by ensuring that people " have access to health information and health promotion" (ES1).

We are happy when our patients get well

Participants believed that patients' satisfaction and recovery become the ultimate goal in nursing care because "when the patients go home [recovered], we succeed" (EI1). Participants further mentioned that "we were happy because we saved patients' lives, …. We were satisfied, family members were also satisfied" (EI3). Participants also implied that efficiency and promptness were two important aspects in saving patients' lives, thus "when a problem arises we ought to help [the patient] as quick as possible" (EI1). For example, in the case of the delivery of a baby, "although we are only a little late, [it could] risk the life of mother and child altogether" (EI1). Furthermore, participants inferred that it was important for them to embrace nursing as a caring profession so that even though in a case when the patients treated them unkindly, in return "[we] would stay calm because our profession is about caring" (EI3).

Quality care is more than being kind

Most participants accentuated nurse's personal character and behavior as important aspects to quality care. Participants described some behaviors that were useful in keeping up quality of nursing service such as maintaining good etiquette and manners, politeness, tenderness, and respect. Participants stated: "we took care of [the patients] not only through our technical actions but also though our physical appearances and behaviors, by [showing] our kindness" (EI2). Nurses' good mannerisms indicated as follows: "we also respected [the patients] as human being, loved them, greeted and

acknowledged them, shook their hands, all of which could help them get well quickly" (EI1).

Participants confirmed that they were not only showing their respect to the patients but also to both their seniors and newly graduate nurses, by at least "to say a therapeutic greetings" (ES2). In other words, saying greetings to each other warmly was considered as effortless action yet worthy way of maintaining therapeutic relationship with their patients and colleagues. Participants considered politeness and tenderness in caring as inseparable from nursing services. However, they also believed that quality care should be more than keeping up politeness and tenderness in caring. Participants stated: "quality of service that is … we are capable of displaying our responsibilities, being alert, and know how to manage our job well" (ES1).

Medicines are not exclusive to quality care

Participants shared their experiences with post-hospitalization patients or with non-hospitalized patients whom they served. Often, when the patients had a chance to meet with them in public areas, the patients and/or their family members express their appreciation to the nurses by saying "this nurse gave me only one tablet [of medication] and I got cured straightaway" (EI1). This saying by the patients or their family members indicated that they appreciated the treatment and care provided by the nurses. Appreciation toward hospitality and politeness provided by nurses while serving the patients went beyond the number of medicines received by the patients. For the patients, nurse complete presence has a special meaning in which it was translated by the patients as a remedy. In this regards participants stated: "when the patients

complained [about their illness], we communicated with the patients in hours, that was already a therapeutic [action] to the patients" (ES2). Participants also reminded that:

> "If our service was only by giving pills [medications], and nurses and doctors were not that close with the patients, they [the patients] became difficult to get cured. As a nurse, we always counsel [the patients], though when there was no family member [around], we were always there whenever the patients needed us" (ES2).

Believing that medicines were not the sole determinant to quality care, participants stated, "medicines alone do not work". One of the participants offered the following opinion:

> "We have provided care with joy and smiles on our face. When the patients came to us and we served them with a swollen face [sullen], did not serve them kindly, [even though] we provided them with a plastic full of medications, it was not effective to help them getting well or be satisfied. Everything must be done through an appropriate care" (EI1).

Gaps in providing quality care

Participants identified some aspects that were important to quality of care yet they found most of those aspects were deficient. These aspects included employment system, knowledge and skills, leadership, skill mix and workload, supplies and equipment, and teamwork, communications as well as cultural approach.

Leadership

Participants uttered their concern toward the absence of the highest-ranking nurse within health care facilities, particularly within hospital organization structure. The absence of a chief nurse who was in charge of nursing in a hospital obscures in directing and controlling activities. For example, many problems occurred in care settings due to unclear of standard operating procedures (SOP) and "consequently, most nursing care activities are not consistently provided" (EI1). Participants also reminded that, "the most difficult one is about lacking in monitoring activities" (ES3). Further, they stated, "there is no a chief nurse in the hospital, so how and what can we talk about [nursing] standards?" (ES2). Hence chaos and disorder were hard to avoid. Participants described about an example of a disorder in the ward:

> "This hospital is running but [everything is] mixed together…. Patients are sent [to a ward] not in accordance with their medical diagnosis…. Many times, I overheard people from inpatient units and the managers have argued [with] each other over many things…" (ES30.

Employment system

Participants voiced out their concerns about employment system inadequacy particularly on recruitment and placement, job evaluation and performance, and promotion. With regards recruitment and placement, participants stated "they do placement [of staff] but without enough knowledge about that person's capacity [competence]. So we are really unhappy about that placement process" (EI3). Staff placement without considering one's competence was not uncommon, as a result "all

activities become impassable and ineffective" as they should be (ES2). Participants observed that performance evaluation should also be applied to employees who earned degrees after pursuing higher degrees while working fulltime, as they said:

> "…. a need to include performance evaluation to see whether [a staff] can be promoted or not… when a staff is graduated from her/his [higher] degree, that person should be considered to include in a conformation and adaptation program so that [it will be] a stimulus to increase her/his motivation to work" (ES3).

Participants considered three aspects that so far have contributed to their satisfaction and performance: "job evaluation, overtime compensation, and incentive and reward" (ES3). They believed that inadequacy in these aspects could harm nurse's motivation and compliant in carrying out their duties. For them, the resentments among staff nurses happened because "… those young nurses [who graduated from higher degrees], they come and surpass us in all aspects, in income and position" (ES3). Regarding the compensations and rewards, length of service, and performance, they described "… diploma three fresh graduates earned $450, we only got $370, so psychologically it affected our performance, the quality [of our service] may decrease" (ES3). Further they explained,

> "We have taught them [the newly graduates] relentlessly, because we cannot rely on bachelor degree graduates, as they don't know many things… but their salaries are higher than us. That makes us having an ill-feel" (EI3).

Problems on rewards and remuneration system also affected other health professionals including doctors, as participants stated, "… many medical doctors... we pity them because even after they got their specialty, they are still paid as general practitioners"

(ES3). According to the participants, experience should be considered as a critical aspect to the rewards and remuneration system, otherwise the workers' behaviors, morale, and motivation were at stake, as they said: "without an acknowledgment, a staff who was diligent became lazy and a staff who obeyed the code of conducts became troublesome and not motivated" (ES3). For the participants, "motivation affects staffs' spirits to carry out their tasks" (ES3). The participants did not merely utter their concerns but they demanded for a change, as they said:

> "We think that there is no clear definition of standards of remuneration and rewards … nothing … some of our friends get lazy, sometimes they go to work but then leave abruptly without any notice, and then [they] return, just like someone who is without sensitivity and a concern at all. So, for how long we have to tolerate and bear people with this kind of attitude?" (EI3).

Knowledge and skills

Education level, knowledge, skills, and work experience could either impede or improve efforts to increase quality of care. Participants stated, "Little or not enough knowledge could impede" (EI1) staff nurses contribution to quality of care. They also realized that "level of educations that greatly vary among health workers" (EI1) hindered in provisioning of good quality of care. They believed that: "… with enough experience, with higher level of education, with well-trained team, we can provide high quality of health service that gives high benefit [to the patients]" (EI2).

Many participants who served as supervisors acknowledged that "staff nurses' technical skills are excellent" (ES2), but they also posed a question said, "if the majority of nurses

graduated from high school level, what can we expect more?" (ES2). The supervisors not only had concerns but also envisioned that it was a need for nurses to have knowledge in case management, to update nursing process, and to improve other related scientific approaches in nursing care. A similar concern came from staff nurse participants as they stated, "our capacity in current medical knowledge is limited" (ES2). Thus, aside from inadequacy in scientifically reasoning of nursing process in nursing care, they also had a limitation with regards current knowledge on diseases, diagnosis, and treatments.

Participants believed that efforts to increase their knowledge and skills could improve their "spirit in working" (EI3) thus "nursing service can run better" (ES2). On the other hand, participants mentioned that if staff nurses failed to increase their competency, "we will get stagnant even until 10 years from now" (ES2). Consequently, there would not be a change in quality of care in the near future.

Skill mix and workload

Participants considered that the current ratio of health professional to non-professional was an impeding factor to high quality of care. Nursing quality of care was questioned when there was an inequity in ratio between high school graduate nurses and college graduate nurses, either bachelor nurses or diploma three nurses. Participant believed that "inadequacy in number and distribution of health professionals" (ES2) had to do with increased workloads among nurses as they stated:

"We nurses do not have time to take a leave… sometimes even in Saturdays we work from morning shifts to night shifts. Also it happens in Sundays, we work long hours until Mondays" (EI1).

They implied that high workloads resulted in physical problems such as fatigues became apparent that led to disruptions in caring activities thus affected quality of care. About these struggles, participants said:

"…. Our service becomes not focused… a person is handing this, then also taking care of that. While she/he is working here, someone calls from the other side [of the ward]… If it continues like that, for sure, she/he gets headache and confused. When staff is not enough [in a shift], ….we work more than it supposes to be. So, there is no a quality in our service at all" (ES3).

Supplies and equipment

Supplies and drugs were considered as supporting aspects. Sufficiency and readiness of these aspects facilitated nurses in maintaining and improving quality of care. Participants believed that medical equipment availability and readiness as well as sufficiency of supplies and drugs necessitated nurses to minimize "patients dissatisfaction toward hospital service" (ES3). Indeed, drugs insufficiency, shortage in supplies, and ineffective of medical equipment became a hot issue in all FGDs. Participants stated that medical supplies were not sufficient in healthcare facilities. For example, when needed, many times medical supplies such as syringes or wound care supplies were not available in CHC. In the hospitals " there are many broken expensive medical equipment but no technician is available to repair them" (ES3). Often, nurses

creatively recycled infusion bottles and then used "that bottles as needles disposal" (EI3). Also, in rural settings where supplies were limited, it was unavoidable that the nurses "treated the wounds using sewing needles" (EI1). Further, participants stated that often they had difficulties to implement what they learned from a training session only because their units had no supplies or equipment as described by the trainers. Likewise, participants mentioned about drugs insufficiency as they stated, "often we have no drugs or if we have them, it is far from enough" (ES3). They believed that inefficiency in other department such as an absent of mechanics to take care of medical equipment could impede the performance of both nurses and doctors, as participants said: " If the equipment is not functioning well, how will we nurses and doctors provide care? This is very problematic" (ES3).

Teamwork, communication, and cultural approach

Participants suggested that functioning teamwork and good communication skills were important to nursing "because what we have in front of us is a real human being" (EI2). They realized that their work's atmosphere was very challenging to build teamwork as they said, "… putting others down and blaming each other among nurses are common and have affected the patients…. And we would then have abandoned the patients" (EI2). While valuing patients' preference, participants reflected that both communication and teamwork approaches mattered to their patients. A participant recalled:

> "It was a time when a patient rejected to be transferred to a [referral] hospital while saying that death or alive I'd rather be here. In fact, we have limited equipment and supplies. We also did not have enough health workers. But the

patient chose us instead. So, we believed that it was our good communication and solid teamwork that covered up all limitations we had" (ES2).

Participants believed that a cultural-based approach although sometimes not being applied well, they considered it an important approach to gain patient's trust. Participants from CHC said: "… we have to visit our patients [in their houses], speak to them using their mother tongue so that in turn they have interest to visit us in health facilities" (EI1). As language plays a crucial role in communication and teamwork, participants from hospitals highlighted that using many languages in healthcare setting became a burden to their daily routine. This concern appeared in relation with language barriers due to the presence of many foreign medical doctors. They said: " It is better to use a formal language, either Tetun, English, or Portuguese. If it is not implemented soon we get the same problem over and over in carrying out instructions from doctors regarding medicines. If we are not clear about the instructions, we can end up injecting a wrong drug" (ES2).

Discussion

Our study indicates that staff nurses signified several aspects contributed to the quality of care. While our participants said that it is important to put their patients in the center of nursing practice, they highlighted some factors beyond nursing realm. An adequacy or inadequacy of these factors plays significant role in promoting quality of care.

Preserving values to uphold patient-centeredness

Our study found some important aspects of quality care. In general, staff nurses believed that care should be delivered safely, equally, efficiently, and in timely manner. In particular, they endorsed the importance of putting the patients in the center of care provision with an ultimate goal of improving patient satisfaction and recovery. These aspects of quality care are associated with attributes of the concept of health care quality adopted globally after being introduced by The Institute of Medicine (IOM) in 2001 [20,42]. They discussed some viewpoints that are link to the concept of patient-centeredness such as promptness, respectful, watchful, appropriate care, total presence as a remedy, and efforts to meet patients' needs. The IOM defines patient-centered as providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions [20]. As patient's value is a crucial element in patient-centeredness, it is imperative that nurses also employ their value system.

Our findings indicate that staff nurses' value system guides their attitudes and behaviors towards their patients. Some moral values such as respect, integrity, responsibility, and equality found in our study are correlated with previous findings on the value of nursing [43]. Such moral values navigated staff nurses' reasoning, actions, and preferences concerning right and wrong or good and bad [44]. It is well documented in the literature that while humanitarian and religious impulses become a motivating factor for nurses in taking care of their patients [45—46], nurses also consider that the vulnerability of their patients serves as a moral duty in their action to care [47]. Furthermore, our participants underlined a cultural aspect in caring when

saying that they took care of their patients the same way they took care of their close relatives. Timorese culture long known recounts on collectiveness, kinship, connectedness, and relationship [48—49]. These aspects of culture allow these nurses to build strong attachments with their patients for better caring relationship and recovery [47]. Thus, their dominant culture strengthens their value system in shaping their attitudes and behaviors.

The values of nursing profession are also emerged from our study. Our participants insinuated that care for their patients must go beyond good etiquette, politeness, tenderness, joyous, and a smiling face. The way our participants looked beyond the physical and psychological aspects of a patient underlines their professional values. It also implies the world-renowned concept of well-being that entails physical, mental, spiritual, and social dimensions [42]. Seeing patient as the whole entity has been documented in nursing profession [50] and it highlights the concept of compassionate caring [51]. Our study emphasizes some nursing values such as compassion, self-sacrifice, and dignity [44]. The results of our study also indicates that nurses' professional values serve as beliefs and ideals in guiding their collaboration with colleagues and other professionals as well as their interaction with patients and families they serve [52].

Quality care milieu

Our participants strongly believed that health-care quality depends on multiple factors beyond nursing care realm. They had strong apprehension toward environment factors associated with quality care including facility infrastructure, equipment, financing,

575 management, training, and staffing. All factors that echoed by our participants tie to the
576 dimension of structure of Donabedian's SPO framework [22]. Our findings support the
577 fact that many low-and middle-income countries including Timor-Leste have struggled
578 to improve health service focusing on either the structure dimension or the process
579 dimension of quality care [21]. This circumstance brings an insight that assessing the
580 quality of care in Timor-Leste must start with an effort to measure the structural
581 dimension of quality care. An assessment of structural dimension includes an appraisal
582 of both the instrumentalities and the organization of cares [53]. Thus, to improve the
583 structural dimension of quality care, it is necessary for initiating a comprehensive
584 health- facility and health-system assessments [54]. A comprehensive assessment will
585 not only provide answers on challenges face health service delivery but also provide
586 insights on how to remedy the shortcomings.
587
588 The impact of a prolong conflict in Timor-Leste degrades health service delivery. The
589 impact ranges from infrastructure and structure of public service to health workforce
590 and to training education [18]. Listed as one of the least developed countries with the
591 lowest socioeconomic development indicators, Timor-Leste shares with other 47
592 countries, a collection of problems in service delivery that includes health supplies
593 inadequacy, broken of facility buildings, and problems with basic equipment
594 maintenance [14,55—56]. With total gross domestic product of $1.6 million [57] and
595 gross national incomes per capita reaches $3,940 [58], Timor-Leste is struggling to
596 improve essential services such as health and education. Timor-Leste's total
597 expenditure on health just reaches 1.48% of total gross domestic product (GDP) and
598 only around 2.4% of general government expenditure, the lowest among small island
599 countries [13,59]. Rebuilding a steady health service delivery system requires financial

600 support, and for Timor-Leste, a long-term support from nongovernmental organizations
601 (NGOs) and donors become necessary [13,18,60—61].
602
603 Our participants indicated that health system performance affects their clinical
604 competence. They implied how health system inadequacy incapacitates nurses to
605 maintain patient safety and to some extent overthrows their personal desire to improve
606 quality of care. Literatures on quality of care emphasize that lacks of staffing and facility
607 infrastructure are associated with poor working condition and increase of workload
608 [45,62]. Also, a limitation in financial resource affects allocation for staffing, training,
609 and compensations that leads to retention and shortage [15,61]. Compensations scheme
610 that include better incentive arrangement increase staff performance in managing
611 medical equipment and drug stocks [63]. Conversely, health system that has problems
612 with remunerations scheme decreases nurses' motivation to advance their academic
613 qualifications thus affecting their clinical skills [15,64]. Problems of clinical skills
614 become more and more because nurses in small island countries usually have limited
615 opportunities to update their knowledge and advance their skills [14,65]. In small island
616 countries where nurses become the backbone of health service [13,14], improving their
617 competency will help the countries in strengthening health system. Further, a poor
618 health system could defeat nurses' overall performance that subsequently costs patient
619 safety [66]. Thus, it is imperative that in order for nurses to do ideal care, health system
620 needs to operate as optimal as possible.
621
622 Our participants implied that heavy workload affects their performance. They indicated
623 that heavy workload has to do with two aspects; a low ratio of nurse to patient and a
624 limited number of higher skill nurses with whom they can consult with. Their concerns

on these two aspects indicate a pressing demand for health system to meet an adequate staffing. An adequate staffing that includes better skill mix proportion will not only help in mending nursing performance but also in restoring health system performance. This finding resonates similar situation faced by nurses in different countries. Some studies done in low-and-middle income countries reported that nurses who worked with insufficient supplies and heavy workloads often failed to perform proper nursing procedures and became psychologically overburdened that inevitably led to patient mistreatment [15,67—69]. Nurses who worked in under-resources health system often came across some ethical dilemmas that stimulated moral distress and challenged them to practice with integrity [70]. However, even working in such circumstances, while overcoming little choices in medical supplies, for example, nurses often decided to choose their patients over limitations in front of them [69—70]. It seems that Timor-Leste nurses are not exclusive in terms of taking a side for the best of their patients amidst their work situations. Consequently, it is not enough to just improving nurses' understanding of professional conduct and ethical guidelines without addressing the whole system's problem. Our findings denote that a strategic approach is needed to improve Timor-Leste health system such that enables nurses and other health professionals to function properly. This strategic approach includes efforts to build a strong nursing regulatory system. Latest analysis on quality care strategies in Asia-Pacific countries indicates that Timor-Leste lags in the following aspects of quality care policies, among others: professional certification and licensing as well as patient safety and medical malpractice [71]. Despite having a draft master plan of national human resources for health (HRH) 2018-2022 [72], recent literatures revealed that several aspects of HRH policy are either missing or inadequately articulated [72,73].

Our participants revealed an absence of nursing leaderships in the hospitals and other healthcare facilities. Their concerns seemed to suggest that career advancement was also problematic. But these problems of nursing leadership and career advancement are not solely found in Timor-Leste. Literatures indicated that elsewhere nurses frequently have little chance to move into higher leadership roles [74] or having little opportunity in career advancement [75]. An example comes from Malta, a small island country in Europe, that nurses too have limited opportunity to advance in leadership position [65]. Barriers to nursing leadership development include lack of structure pathway for developing nurse leaders, lack of formal leadership training, lack of funding, and time constrains. In addition, inflexible organizations and nurses feeling devaluated by the system became barriers to nurse leadership achievement [74,76]. Our findings provide a hint that nurses in Timor-Leste likely face similar barriers in leadership development.

The presence of nursing leadership improves patient safety. Literatures provided evidences that nurse leaders at all level play an important role in decision-making that affects efficiency and quality of care [77—78]. This decision-making role differs as nurse leaders progress their career from a unit level to a higher level at the hospital or from a health program manager at CHC level to a higher level at the district health office. A frontline leader at hospital unit, for example, focuses more on patient flow and staffing whereas nurse leader at higher level contributes in strategic direction, inspiring excellence in nursing and strong professional practice environment [79-80]. Both frontline and top hierarchy nurse leaders when functioning effectively influence how nursing is practiced and how nursing professional is valued. But, a lack of effective leadership that leads to adverse patient outcomes such as medication errors and patient falls [81] affects how society regards nursing professional. Additionally, while an

effective leadership leads to better recruitment and retention [62,77], it also improves an organizational culture that promotes patient safety [82]. Thus, improving nursing leadership in the country will navigate Timor-Leste's nurses to deliberately progress to the next two dimensions of quality of care described by Donabedian [22]. Nursing leadership will improve interaction between nurses and the patients thus stimulating process dimension for better outcomes.

We indicated some limitations in this study. This study did not include nurses in academic settings as participants. These nurses may have different experiences and perceptions on quality of care thus improving triangulation and would comprehend understanding of quality of care. However, some faculty members were invited to discuss the findings of the study and they agreed with the results. To improve the internal coherence of this study, the results were also discussed with some experts in nursing services and disseminations were held to include nurses from hospitals and CHCs and other healthcare professionals. All discussions indicated an agreement with the findings. In addition, this study included only some districts in Timor-Leste. Therefore, although findings from this study suggested for strategic and systemic approaches to improve health care delivery, they should be used cautiously.

Conclusion

The results of our study show that while embracing quality of care, nurses in Timor-Leste face many difficulties in the provision of care. Despite of nursing skill mix, staff nurses exercised their value system and embraced the concept of patient-centeredness to promote quality of care. Although our study did not include stakeholders in health

care facilities other than nurses, our results provide an important fact that both an inadequacy and a deficiency of various structural and environment factors of health care delivery gives a negative impact to nursing competence and performance that in turn incapacitates them to improve the quality of care. Consequently, improving the quality of care requires health system restoration allowing for nursing profession development to reach its full potential. Improving nursing leadership becomes urgent because it stimulates excellence in nursing care that helps health system to progress beyond quality of care's structural dimension. Our findings can inform many actors ranging from researchers, health facilities' administrators, leaders of national health system, and international NGOs and donors. Researchers can come up with studies to explore other stakeholders such as patients or administrators' perspectives on quality care. Health facilities administrators and leaders of national health system can use information from this study to develop a comprehensive assessment of health care facilities and health system. Results from theses assessments can be used to improve staffing, health system, and quality care policies. Our study portrays both the uniqueness and the breath of nursing profession in a prolong conflict country. This data enriches factors that are important to quality care in under-resources places and can be used to improve quality care measurements. Our study implies that financial suffering and hardships faced by small island low-income countries could impede their progress to achieve universal coverage (UHC). Data from this study can inform international NGOs and donors to include in their long-term strategies to support these countries to reach a strong health system thus supporting access to quality care.

Abbreviation

CHC: Community Health Center; FGDs: Focus Group Discussions; GDP: Gross Domestic

Product; HRH: Human Resources for Health; IOM: the Institute of Medicine; NGOs: Nongovernmental Organizations; SDGs: Sustainable Development Goals; SOP: Standard Operating Procedures; SPO: Structure Process Outcomes; UHC: Universal Health Coverage.

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Availability of data and materials

The FGDs transcripts generated and analyzed for this study are withheld to protect participants' identity.

Ethics approval and consent to participate

Ethics approval was obtained from the Human Right Ethics Committee of Ministry of Health, Timor-Leste.

Consent for publication

The manuscript contains anonymized quotations from FGDs. All participants were informed about the potential for publication and signed informed consent forms.

Competing interests

The authors declare that they have no competing interest.

Contributors

BML reviewed literatures, designed the study, trained and led the role-play for data collection procedures, analyzed the data, drafted and revised the manuscript. PL did in-country literature review, supervised and collected data, counterchecked the transcriptions, participated in data interpretation, commented on the draft. DS did in-country literature review, collected data, counterchecked the transcriptions, participated in data interpretation, commented and revised the manuscript. All authors read and approved the final manuscript.

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