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Placing Care: The Impact of the Physical Environment on Experiences of Providing and Utilizing Palliative Care

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ABSTRACT

Background: Environmental design in palliative and end-of-life care is known to improve care outcomes, service-user satisfaction, and the continuation of service uptake. No study in the literature has investigated the influence of the environment on palliative and end-of-life care in Nigeria or other African contexts.

Purpose: This study was designed to explore the impact of the physical environment (i.e., place and people) on staff and service users and how these influence the experiences of providing and using palliative and end-of-life care in a Nigerian hospital context.

Methods: Ethnographic methodology was employed because this approach facilitates understanding of environmental realities. This study is part of a larger ethnographic research project developed to uncover aspects of organizational complexities related to the provision and use of palliative and end-of-life care in the Nigerian context. Three hundred fifty hours of participant observation was achieved, and semistructured interviews were used to gather data from 26 participants, including 10 patients, 11 members of a palliative care team, and five hospital managers. Informal chats and photographic capture were additional methods used in data collection. Thematic analysis was conducted to identify and analyze patterns within the collected data.

Results: Physical space, equipment, and placing staff were the three primary themes identified. The physical environment was untidy, and the ward layout prevented privacy, dignity, or comfort for patients and families. The equipment was old and inadequate, and the context of care was worsened by insufficient staffing and neglect of the environmental needs of the staff.

Conclusions: Hospital design for palliative and end-of-life care in Nigeria is “autoinhibitory” (a negative feedback mechanism whereby hospital design detracts rather than promote quality of care), and a physical environment that supports the provision and utilization of care must be implemented to promote palliative and end-of-life care success. Urgent policy action is needed to improve environmental and staffing conditions to advance palliative and end-of-life care in Nigeria.

KEY WORDS:

environment, end-of-life care, healthcare practice, Nigeria, palliative care.

Introduction

The environment for healthcare is complex because it constitutes settings whereby service users, staff, significant others, and technologies constantly interact, placing significant pressure on how these built environments should be designed to meet the ever-changing needs of patients and staff (Elf et al., 2020). Nightingale highlighted that the interaction of persons and the environment can impact care, implying that the built environment in which staffs operate and deliver care impact the quality of care delivered, whereby a supportive environment is more conducive to high-quality care (Nightingale, 1946). Numerous studies in non-African contexts have revealed the positive impacts of built environments on well-being in patients, patient families, and staffs. For example, windows with a view of nature and natural light have proven to reduce patient stress (Schreuder et al., 2016). The availability of handrails and nonslippery flooring reduce falls, and a design that promotes staff visual access to patients has been shown to enhance staff perceptions of the safety of their patients (Copeland & Chambers, 2017; Melo, 2018). The presence of spaces for staff to provide care to patients and their families promotes job satisfaction for the staff and stress reduction (Copeland & Chambers, 2017). Design features in the built environment such as various room types, audiovisual systems, safety, and wayfinding systems are important determinants of how staffs and service users feel, think, and act, which may impact organizational, staff, and service-user outcomes (Brambilla et al., 2019).

Some studies have explored the impact of the built environment on patients in the context of palliative and/or end-of-life

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care. For instance, it was found that healthcare professionals perceived ward layouts that provide an appropriate level of privacy promoting sensitive communication to be fundamental to attaining an optimal physical environment for palliative and end-of-life care in an acute setting in the United Kingdom (Gardiner et al., 2011). Other factors found to be crucial to end-of-life care in terms of contributing to a good death include places that promote family grieving, ward layouts with enough space to accommodate families of the dying person, good lighting, good furnishing, and a quiet environment (Slatyer et al., 2015). These findings agree with a 2018 integrative review of environmental design for end-of-life care, which found that people and place have a dual impact in terms of bolstering or reducing quality of life for patients and their relatives (Zadeh et al., 2018). For instance, environmental designs or conditions may either promote or reduce privacy, social stimulation, loneliness, positive distractions, and care provider satisfaction (Zadeh et al., 2018). This implies that environmental design influences the context of care, which may improve or hamper the quality of life of service users.

Overall, ensuring that hospital environments for palliative and/or end-of-life care is conducive for staff, patients, and their families is important if a peaceful and dignified death is to be prioritized for patients, and care satisfaction for patient families and staffs is to be achieved. Although evidence regarding the impact of the physical environment for palliative and/or end-of-life care on the well-being of service users and staff has been found in high-income countries, countries in Africa are generally underresearched and no related studies have been conducted exclusively in an African context. Therefore, understanding individuals' experiences and perceptions of, as well as conducting observations about, the physical care environment is essential if we are to identify strategies and plans for improving built hospital settings, especially in the context of palliative and end-of-life care in Africa. Research revealing the influence of environmental design in the African context can contribute broadly to advancing knowledge in this field, with implications for better care outcomes.

Nigeria operates a heterogeneous healthcare system comprising both orthodox and nonorthodox pathways with several categories in each category (Agom, Allen, et al., 2020). It has been shown that Nigeria's orthodox, three-tier pathway for healthcare delivery causes confusion about the appropriate place to seek care and difficulties in decision making for terminally ill patients and their families, thus making access to oncology and palliative care (PC) unnecessarily complex (Agom et al., 2019). Although attempts have been made to improve healthcare delivery in Nigeria, the healthcare system here has continued to experience numerous challenges such as inadequate funding, limited political commitment, structural complexity, lack of clarity in the roles and responsibilities at different systemic levels, and inadequate human resources (Oleribe et al., 2019). Moreover, the COVID-19 pandemic has further added to existing challenges. More

than two decades after PC was introduced in Nigeria (Wright et al., 2006), quality of related care continues to be limited in terms of the poor accessibility to and availability of PC (Agom et al., 2019). To date, PC researchers in Nigeria have mainly focused on topics such as the knowledge of and attitudes toward PC, patients' experiences of PC, telemedicine's potential to support the achievement of a good death, meaning-making in serious illnesses, data and informational needs related to PC, social and healthcare system complexities impacting PC, the organizational culture related to PC, and the educational culture surrounding palliative and end-of-life care (Agbawodikeizu et al., 2019; Ndiok & Ncama, 2019; Agom, Ominyi, et al., 2020). No study has investigated the influence of the environment on palliative and/or end-of-life care in Nigeria or any other African context. This study was developed to explore the impact of physical environments (i.e., place and people) on staff and service users and how these environments influence the experiences of providing and using palliative and end-of-life care in a Nigerian hospital context. This research was motivated by a desire to understand the intricacies of the relationship between the physical environment and the provision and use of palliative and end-of-life care. In-depth information from a single study site is relevant because it provides evidence for theory development. Acquired ideas and insights should be transferable to other similar contexts in Africa to inform the design and operation of palliative and end-of-life care settings for service improvement. This study is part of a larger ethnographic research project that was designed to identify organizational complexities related to the provision and use of palliative and end-of-life care in a Nigerian context. Evidence related to the impact of education on care provision and utilization has been published elsewhere (Agom, Onyeka, et al., 2020). In this study, the physical environment where patients receive PC was explored to provide insights into how these environments affect our understanding of organizational realities regarding how PC is provided and used.

Methods

Ethnography

Ethnography focuses on understanding the cultural perspectives of groups in their natural settings (Boccagni, 2020). The methodological strength of the ethnographic methodology is its ability to provide researchers with opportunities to engage with and understand the practices of participants in performing daily activities (Boccagni, 2020). This methodology provides the opportunity to understand both the tacit and explicit rules for behavior and the environmental complexities that impact the provision and use of palliative and end-of-life care. Organizational ethnography, which is an "ethnographic study, and its dissemination, of organizations and their organizing processes" (Ybema et al., 2009), was utilized in this study, which is part of a larger ethnographic research work (Agom, Onyeka, et al., 2020). Although this

form of ethnography does not differ methodologically from other forms of ethnography, it facilitates an understanding of the environmental issues that influenced the activities of participants in their organization, which aligns with the primary aim of organizational ethnography (Nyland, 2008).

Participants and Setting

This study was conducted in the largest and oldest teaching hospital providing organized oncology, palliative, and end-of-life care in South-East Nigeria in physical spaces where palliative and end-of-life care is provided and used such as the room designated for PC clinic consultations, wards, and the nurses' station (where nurses perform their duties when not working directly with patients).

The hospital was purposively selected as the site for this study because it was the oldest and largest setting receiving referrals of patients with palliative and end-of-life care needs across the five states in eastern Nigeria and other neighboring states. This federal-government-owned hospital provides palliative and end-of-life services such as outpatient consultations, counseling services, bereavement support, family meetings, inpatient ward rounds, and home visits (Agom et al., 2019).

The participants were purposively selected based on three criteria: (a) currently involved with the provision of palliative and end-of-life care, (b) currently receiving palliative or end-of-life care and assessed as having the capacity to provide informed consent, and (c) serving as a key decision-maker on issues related to the provision and utilization of palliative and end-of-life care. The participants included 10 patients and all 11 members of the PC team (three doctors, four nurses, two social workers, a pharmacist, and a physiotherapist). Five managers of the hospital were also included on the basis that they are key decision-makers about issues related to the provision and utilization of palliative and end-of-life care. Thus, 26 participants took part in this study, drawn from three participant groups: healthcare professionals, patients, and hospital managers.

Ethical Approval and Considerations

Ethical approval was obtained from the hospital research ethics committee (ref. no.: NHREC/01/2008B-FWA00002458-1RB00002323). All of the participants signed written consent forms after being provided with an information sheet about the study that detailed the strategies for maintaining their confidentiality, anonymity, and privacy. Although a meeting was held with the participants in which information about the study was provided and opportunities for asking question were given, process consent was still obtained at the start of each day of the observation by asking the healthcare professionals to verbally confirm their willingness to continue with the study. All individuals present in the wards who were not part of this study were informed about the study by the ward manager.

Data Gathering

Four forms of data gathering were used: participant observation, informal chats, photographic capture, and semistructured interviews. Managers and patients participated only in interviews, whereas healthcare professionals took part in observations, informal chats, and interviews.

Participant observation, informal chats, and photographic capture

Participant observation was conducted by the lead author (a) in the PC clinic offered by the hospital, (b) in the nurses' station, and (c) during ward rounds between March and May 2017. A participant-as-observer stance, whereby a researcher is a member of the group being studied and the group is aware of the research activity (Gold, 1958), was adopted during the observation, as this approach facilitates field immersion with the participants and their daily rituals. The lead author worked as a nurse while participating in the activities of the PC team to gain the emic and etic perspectives of the care environment (place and people), which were recorded immediately as written field notes. This was followed by the writing of expanded field notes written at the end of each day of observation. Observations were conducted during morning and evening shifts using an observation checklist as recommended by Spradley (2016), with a focus on the nine dimensions of social situation: space, actor, activity, object, act, event, time, goal, and feeling. Each observation lasted for over 8 hours in line with the shift pattern of the PC unit. Twelve weeks of observations was achieved to arrive at 350 hours of observation needed to attain saturation of the observed environmental realities. Long-term immersion of the researcher in the field was necessary to understand the tacit and implicit meanings, requiring many hours of observation.

Informal chats with participants as they performed their daily duties were carried out to clarify observed practices and their link to environmental conditions. Informal chats were limited to those staffs (members of the PC team) who had agreed to be observed during their activities. Many short, informal chats were conducted, although the number of such chats was not recorded. Relevant photographs of both the physical structure and equipment were taken during the fieldwork because images evoke deeper elements of human consciousness than words (Edmondson & Pini, 2019). We believed that photographic evidence in conjunction with other sources of evidence would trigger emotions and discussion, with the potential for creating more health-supportive palliative and end-of-life care environments.

Interviews

The lead author utilized in-depth, semistructured, face-to-face interviews to gather information from the 26 participants. Individual interviews were carried out in English at a time and place convenient to them. Each interview session with members of the PC team and the patients commenced

with a broad, open-ended question, “What are your experiences and views about the environment for provision and utilization of PC?” to provide an opportunity for participants to give their accounts about the environmental issues impacting on the care they gave to patients. Follow-up questions were asked based on the accounts participants gave to the initial opening question. Interviews with the managers were conducted to elicit more information on the underlying reasons for the environmental issues raised by the staff and patients to achieve an in-depth understanding of the emerging pattern about the issue under investigation. Each interview session was digitally audio-recorded and lasted between 45 and 90 minutes (an average of 67 minutes), ending at a point when each of the participants had nothing else to say, despite the use of prompts.

Data Analysis

Ethnographic data analysis begins as soon as the ethnographer commences fieldwork (Spradley, 2016), as was the case for this study. As recommended by Fetterman (2019), the lead author informally and iteratively commenced making sense of the daily field notes to identify issues that may need further investigation before the next visit to the field.

After informal analysis in the field (whereby field notes were made to capture ideas *in situ*), all data were subjected to thematic content analysis based on the six steps outlined by Braun and Clarke (2006), starting with reading the transcript of the interviews to attain data familiarization. This was followed by the importation of the data into qualitative data analysis software, NVivo Version 11 (QSR International Inc., Massachusetts, MA). Coding was done by the lead author to produce numerous initial codes. A search for relationships among the codes was independently done by all of the authors. The initial themes generated were discussed among the coauthors and were organized based on relationships among the codes and their relationships to the issue under investigation until agreement was reached across the team to arrive at three themes, as shown in the thematic schema in Figure 1. Semiotic analysis was applied to the photographs, as this approach is consistent with the interpretive philosophy underpinning this research (Chander, 2017). This implies that both the literal meaning and the underlying interpretation of the images concerning the environment for care were analyzed.

Rigor

Trustworthiness criteria for qualitative research such as dependability, applicability, and credibility were utilized in this study. Dependability was achieved using persistent observation as well as method triangulation, whereby information elicited from different sources was analyzed collectively by the coauthors to minimize bias and enhance the credibility of the findings. Prolonged engagement is another element of this study that contributes to credibility (Lincoln & Guba, 1985), allowing for an extended time in the field to understand participant perspectives and experiences during

data collection. In addition, thorough documentation of the methodological and analytical approach, as well as a detailed description of the research procedures, promoted study dependability (Mackieson et al., 2019). In addition, confirmability was achieved using peer debriefing and member checking (Lincoln & Guba, 1985). Twenty participants agreed to check and confirm the analysis. To ensure the credibility of the generated themes, a discussion of codes and how they translated into themes was held with research mentors. Any disagreements were discussed until a consensus on meaning was reached and decisions on theme constitution were jointly made. A thick description of the findings and methodology enables readers to assess the applicability and extrapolation of the study to other contexts (Mackieson et al., 2019).

The lead author assumed the position of insider–outsider. The insider positionality was based on shared professional, geographical, and ethnic identity with the participants, whereas the outsider position was based on the fact that the first author has neither sought care nor previously worked as a nurse at the study site. The outsider position caused a Hawthorne effect, as would be expected in ethnographic research, but this disappeared as the trusting relationship improved. The insider position promoted acceptance, facilitated field relations, and eliminated communication barriers with the participants. Reflection, daily review of the research journal, and reflexivity (critical reflection) throughout the research process were undertaken as part of the meaning-making process and the audit trail to enhance the credibility of the findings.

Power dynamics are often located within the shifting positionality. The lead author's age and lower professional rank as a nurse and perceived role as a researcher shaped the power discourse in the relationship with the participants. Among the participants, nurses considered the lead author as a junior colleague and, thus, less powerful. However, being perceived as a researcher facilitated open communication.

Results

The three themes generated after data analysis were as follows: (a) physical space for PC, (b) equipment for PC care, and (c) placing staff. These themes are illustrated in the thematic schema in Figure 1. The first theme revealed that the physical environment for palliative and end-of-life care constitutes a space in which architectural layout, interior design, and ambient features impact the provision and utilization of care. This was further complicated by either lack of or inadequate maintenance of equipment, as discussed in Theme 2. The last theme reveals that the environmental needs of the staffs were neglected, creating negative impacts such as distress and physical exhaustion. This was further worsened by inadequate staffing levels for providing PC. The interplay of these physical environmental conditions impacted the care outcomes and welfare of staff, patients, and their families. These themes are presented and discussed below.

Physical Space for Palliative Care

The participants highlighted that too few rooms were dedicated to patients receiving PC and their families:

...and there are only two rooms (a nurses' station and the PC outpatient clinic) in this complex allocated for palliative care. (Nurse 3)

Can you imagine that doctors from the oncology unit are trying to take the only two spaces we have here? (Doctor 1)

My mother and I always sit in the corridor to wait for the doctor. (Patient 5)

Essential spaces such as a treatment room, a lounge for patients' relatives, and a patient waiting room were unavailable.

Even those spaces allocated for PC were said to sometimes be used by physicians from the oncology unit. The absence of essential physical space for PC illustrates that service users may not receive certain essential services such as counseling. While participating in the daily activities of the PC team, the lead author observed that patients and their relatives were admitted and cared for in an open ward arranged with numerous beds without curtains to demarcate spaces between patients, as shown in Figure 2.

Visible in this image is the proximity between beds, suggesting that an appropriate level of privacy would be difficult to maintain, which may make it more difficult for patients to engage in difficult conversations with health caregivers and/or their families. This image also shows the poor state of

Figure 1

Thematic Schema of the Physical Environment of Palliative Care (PC)

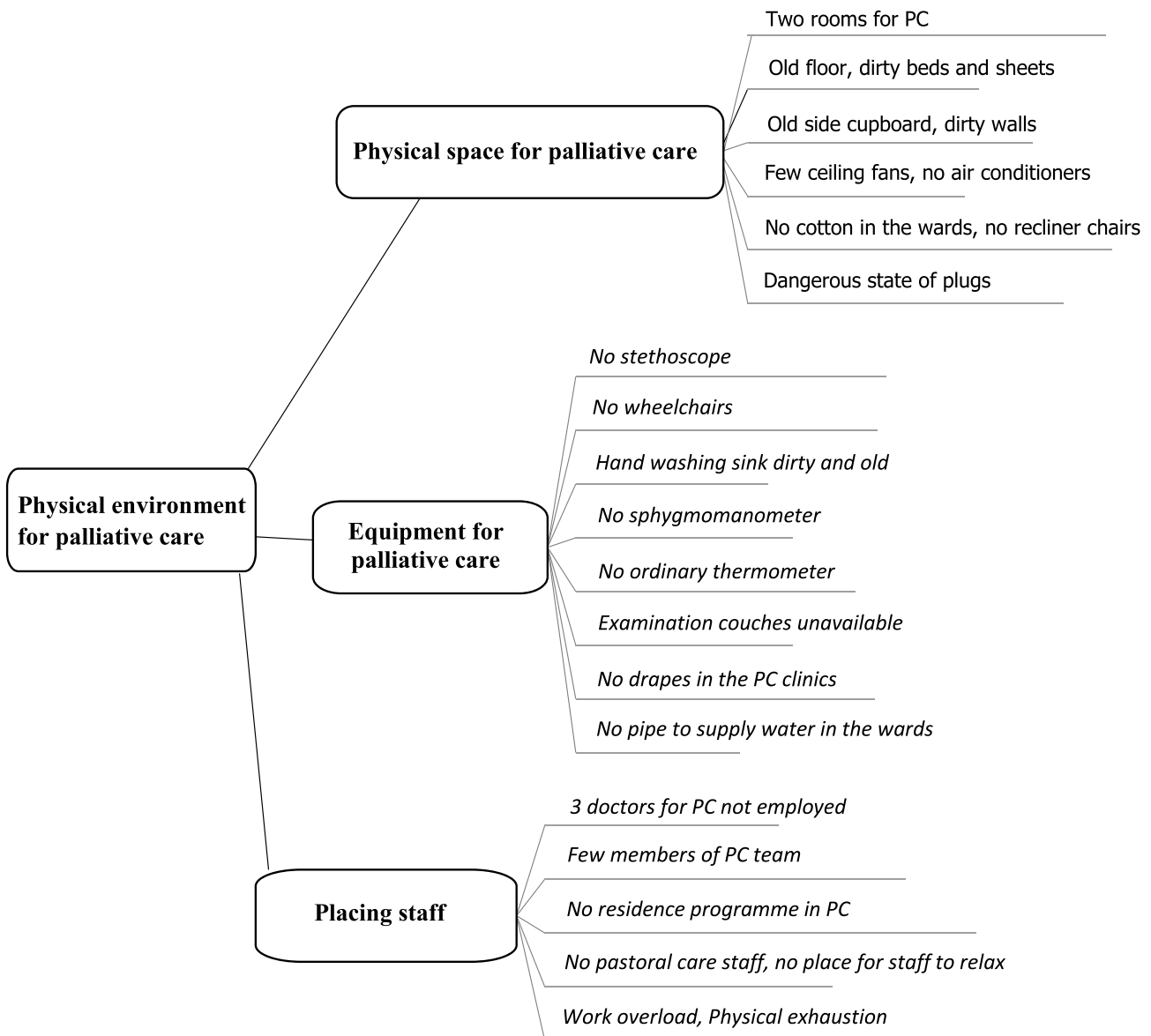


Figure 2

Interior View of the Ward



furnishings in the space, the dangerous state of the plugs, the poor condition of the side cupboard, and the metal projection of the beds, suggesting a lack of cultivation of this space as a safe, comfortable location for delivering palliative and end-of-life care. During the fieldwork, the lead author observed, as shown in the image above, that all of the spaces appeared dirty, lacked appropriate furniture, and did not have air conditioners to maintain appropriate ventilation that could promote comfort and quality of life. However, some of the wards had functional ceiling fans. Some of the patients and their families also complained about the poor state of the physical environment:

The floor looked dirty, no chair for patient's relatives, beds look obsolete, side cupboard, bed sheets looked dirty and obsolete, no air-conditioners, but with few functional fans.... (Field note)

I expected the ward to be neat but it is not, the walls, glass windows, floor tiles, and ceiling looked dirty and old...(sigh). (Patient 8)

The poor condition of the physical space provides evidence that service users had poor life experiences because the space for care constrained their quality of life. Furthermore, the patients who were bedbound and their family members were observed to be panting, groaning, and moving away from the bed of a patient who had passed away but had been left for several hours in the ward:

A patient who had passed away in the early hours of the morning was covered with a drape and left in the open ward until afternoon. (Field note)

I felt very anxious because a dead body was left beside me for a long time...wanted to run away but I can't walk. (Patient 4)

The delay in the removal of the corpse from the ward, together with the lack of curtains for privacy in this open-plan ward, appeared to cause distress and dissatisfaction in patients and their families. Perhaps, curtains to demarcate one patient's bed from another and providing some visual privacy may have reduced the distress. In addition, a private room may be allocated to place those who have died.

The patients receiving palliative and/or end-of-life care and their relatives were observed to share the same space (ward) with other patients who had either acute or non-life-limiting illnesses because there was no designated ward for people approaching their end of life:

... You are aware that there is no specific place or ward where terminally ill patients are admitted and cared for. (Doctor 3)

The wards are not ideal for the services we render; it is noisy.... (Nurse 3)

Here is very noisy sometimes, I would prefer a more quiet space. (Patient 9)

This may imply that terminally ill patients were cared for in the same ward as acutely ill patients, although these two groups have different healthcare needs and outcomes. It may be inappropriate for them to share the same room because of practical difficulties such as high noise levels that may detract from the person-centered care necessary for those who are in the process of dying. Other healthcare professionals added that poor planning of the physical space for PC contributed to the tediousness and tiredness they experienced in providing care:

Our patients are scattered in all the wards, which makes the work tedious and cumbersome. (Doctor 3)

We the nurses do not stay with our patients in the wards, because we are limited in number. (Nurse 4)

The absence of a designated ward either for individuals approaching the end of life or for providing PC may significantly increase the time needed to walk from one ward to another while reducing the amount of time the PC team has available to provide care. The lead author also observed that healthcare professionals were working in extremely hot weather without air conditioning in the wards, which indicates an environmental condition that may lead to discomfort for both healthcare providers and receivers.

Equipment for Palliative Care

The members of the PC team highlighted that basic clinical equipment and infrastructure were lacking in the nurses' station and outpatient clinic:

We have no core equipment like a stethoscope, examination couches, wheelchairs sphygmomanometer, and ordinary thermometer. (Nurse 3)

Most of the time I had to check if the examination couch in one of the doctors' consulting rooms in the oncology unit is free to be used.... (Doctor 1)

Inadequate equipment, as professed by participants, was consistently observed, indicating a lack of place-making for the PC unit and suggesting that quality of care may suffer as a result. For instance, the absence of an examination couch

may delay provision of care for other patients, leading to increased patient waiting times and potentially increasing work stress for doctors and nurses. What appears more remarkable was that most of the available equipment looked unusable and badly maintained. Moreover, there were no inbuilt oxygen pipelines and other facilities, as shown in Figure 3.

Furthermore, relating to the findings of the facilities for PC, the electricity supply was widely reported to be unreliable, which negatively impacted the use of some facilities for patient care. The water supply was inadequate as well, with details provided in the field notes and in Figure 4:

Power supply goes off sometimes for about 48 hours. If there is no power supply, you cannot operate some equipment, such as suctioning the patients. (Nurse 5)

The water facilities are not functional, and the washing hand sink looked dirty and old. (Field note)

The position of the yellow bucket suggests a leak from under the washing sink, indicating a lack of maintenance of the infrastructure. The lack and/or inadequacy of the water supply infrastructure for the wards and clinics may lead to poor personal and environmental hygiene, which may increase the risk of infection for terminally ill patients who already have weak body immunity.

Some of the patients reported dissatisfaction with some facilities, for instance:

My bed looks old, the springs are broken...this worsens my pain. (Patient 10)

This suggests that the lack or poor condition of facilities as well as the physical space affect the physical well-being of the patients. These may also impact the emotional and psychological well-being of the patients and their family members.

The healthcare professionals attributed the physical environmental inadequacies (poor materials and infrastructure) to poor financial support for palliative and end-of-life care

Figure 3

Sample of Equipment in the Ward

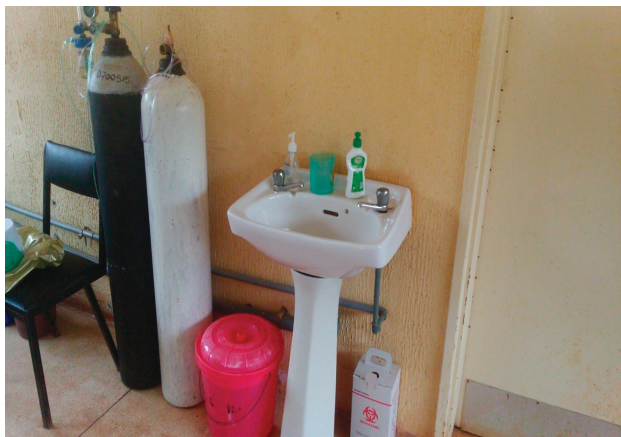


Figure 4

Hand-Washing Facility in the Ward



services by the hospital management. However, the managers blamed inadequate funding from the federal government for the poor environmental conditions:

The hospital management did not provide funds for palliative care services. (Doctor 1)

The truth is that this hospital is poorly funded by the Government. The money we receive from the Federal Government is not enough to pay electricity bills..., we have no budget for palliative care services. (Manager 1)

Probing of the members of the management team further supported that funds were allocated only to units that could generate a profit for the hospital:

What we do here is to push funds to areas we can recover the funds. We do not spend funds on dead-ends, we try to spend it on an area we can recover the cost so that we can continue to render services without experiencing failures. (Manager 4)

This suggests that profit making is a criterion that affects the allocation of funding in the studied hospital, indicating that hospitals owned by the Nigerian Government may be shifting into a state whereby healthcare services are perceived as “economically good” rather than “socially good.”

Placing Staff

The insufficient space required for the provision of palliative and/or end-of-life care places staff in a circumstance where they must take responsibility to search for free spaces to use:

We run around trying to look for space to render services such as counseling, and to examine patients. This is very exhausting and there is no staff room to relax during a break. We do this to reduce the waiting time.... (Nurse 1)

A nurse was seen sweating and was overheard telling her colleagues that she could not find a free place for patient examination. (Field note)

Searching for and identifying space and managing the immediate implications of the space shortage indicate staff

desires to improve the well-being of their patients and reduce waiting times but reduce the time that staff can effectively use in their caring responsibilities. This also had a significant and negative impact on the staff, as indicated in the above quote, in terms of physical exhaustion, implying that staffs are not enabled to practice effectively because of a lack of supporting infrastructure and environment designed with staff needs in mind. The environmental stress already experienced by staffs was further worsened by staffing shortages. For instance, the healthcare professionals repeatedly raised concerns that the PC unit was understaffed. Observations further emphasized the inadequacy of staffing levels for providing care to terminally ill patients and their families:

Four nurses, two doctors; two social workers, a pharmacist, and two physiotherapists constitute the members of the palliative care team. (Doctor 1)

We do not have resident pastoral care staff, but we often invite a priest or pastor to provide spiritual support to our patients. There is a problem of lack of dedicated space for those invited to work from. (Nurse 3)

These excerpts exposed that the PC team lacked essential members such as chaplains, psychologists, music therapists, art therapists, counselors, and dieticians. This indicates that the PC team was aware of the limitations of what care they could provide. They strove to compensate for some of these limitations by inviting a priest or pastor to provide spiritual care to the patients when required, but without adequate dedicated space for those professionals to work in, thereby making it difficult for them to fully discharge their duties. Remarkably, the three doctors in the PC team were neither employed nor recognized by this hospital as PC providers. One of these doctors was a volunteer, whereas the other was employed by the hospital, but not as a PC physician. This was acknowledged by some of the participants:

Two doctors that work in the palliative care unit are doctors from the anesthesia department and I am a volunteer.... (Doctor 3)

Although I work in a palliative care unit, it is not my primary assignment. (Doctor 1)

The composition of the PC team could imply that patients and their families who sought palliative and/or end-of-life care in the studied hospital may not have received all the specialist care they required to alleviate their suffering and improve quality of life. Insufficient staffing was perceived to be because of the lack of a PC residency program for doctors, lack of an organized educational program in Nigeria for training healthcare providers in PC, and lack of money to spend on physical space to enable staff to effectively do their work.

We do not have a structured residency program in palliative care. Because there is no structured residency training, people have no way of getting there. (Manager 5)

As far as I am aware, there is no institution in Nigeria for palliative care training, therefore there is even a lack of specialist palliative care professionals to employ. (Manager 2)

We cannot employ because there is no money to pay the salary of people that are employed. There is no funding from the government to employ more staff and to address the environmental needs. (Manager 1)

The lack of an educational institution for training PC professionals, no space for educational resources in the study site, and inadequate funding by the government may suggest a failure of leaders in the Nigerian healthcare sector to provide leadership and initiative and show commitment to PC development. Most of the PC team highlighted the pressures they faced in the provision of care to patients because of poor environmental design and too few staff:

...I am overworked by doing my primary duties in which the hospital recognized and rendering palliative care...lack of space makes me stay longer to see patients because I must wait until I find a space. (Doctor 1)

I will do a double shift today because two other nurses are on leave. I feel stressed. (Nurse 1)

The members of the PC team suggested that they faced unmanageable workloads that exceeded their capacity to cope, leading to stress that they attributed to a heavy patient load, insufficient space, and inadequate staffing levels.

Staffing levels impacted the quality of care rendered to patients and their families negatively. For instance, the shortage of staffing and insufficient space had also resulted in leaving some patients unattended for long periods in the PC clinic and wards:

I usually wait for several hours to see a doctor each time I come here. Sometimes there is no place to sit.... (Patient 3)

"I don't want to start what I will not finish"... There is no resident doctor under the palliative care unit that will monitor the patients if I do abdominal tap and our nurses do not run night shifts. (Field note)

These comments indicate that terminally ill patients have inadequate space in which to receive comfort and medical care. These patients experienced avoidable delays in receiving services that may have improved their well-being because of staffing shortages. In some instances, as depicted in the field notes, a patient was denied a procedure that would have alleviated distress because of the lack of resident doctors and nurses able to provide postprocedural care. This was an indication that some patients may have experienced poor physical, psychological, and spiritual well-being because of the unavailability of staff to meet their time-specific palliative and/or end-of-life care needs. Therefore, unsafe staff capacity and environmental inadequacies undermine quality of care.

Discussion

The physical space available to provide palliative and end-of-life care to patients was found to be either insufficient or in a poor condition. A more disconcerting finding was that there was no spaces such as a lounge area for patient relatives to grieve or relax and that staffs had no room to relax during their break time. This suggests a lack of care for the caregivers and staff, which is an indication for policy action. Terminally as well as acutely ill patients were found to be cared for in the same space, signifying a lack of ability to provide adequate person-centered care. Members of the PC team as well as the patients in this research criticized the hospital wards as being noisy and inappropriate places for palliative and/or end-of-life care. Noises likely create additional discomfort and stress for the patients and their families, thereby worsening their physical and psychological well-being. Previous research has shown noise level to be associated with disturbed sleep in patients and to cause communication difficulties among patients, visitors, and staffs (Loupa, 2020).

The ward layout in this study was found to be based on the old Nightingale ward design (open-spaced with several beds and without demarcation between beds), which does not meet current needs and expectations such as respect for privacy. It has been documented that hospital designs with adequate space that support visual access and patient proximity decrease patient loneliness and suffering and increase family satisfaction (Zadeh et al., 2018). It may be argued that the ward design in the studied hospital promotes physical proximity and is thus supportive of social interaction. However, this may not be appropriate for patients approaching the end of life, who need curtains that may be pulled around to provide visual privacy, indicating that dignity was compromised in these wards.

Preferences of room types for end-of-life care is a controversial subject (Williams & Gardiner, 2015), with indications that the physical environment should be designed with options for one bedroom (side room), bays, and a room with more than one bed (main ward) to help meet the individualized palliative and/or end-of-life care needs of patients. Notably, patients in this study could not make choices about room types because of the lack of room-type variety, indicating the need for layout and design modifications. In addition to the architectural layout, interior and ambient features were found to inhibit the effective provision and utilization of palliative and end-of-life care. The clinical equipment was also found to be insufficient and poorly maintained. It can be seen from the signifiers (objects within the images) the lack of place-making (Feld & Basso, 1996) in the PC unit, implying that no one seems to have assumed responsibility to make the physical environment comfortable for patients and their families.

A comprehensive PC team must consist of specially trained clinical and nonclinical staffs because of the complex needs of people with progressive, life-limiting illnesses. In this study, the composition of the PC team shows that certain essential members were missing. Previous research has shown that increased workload resulting from poor staffing is associated with back pain, emotional exhaustion, job dissatisfaction,

and burnout (Nantsupawat et al., 2016). Specifically, a lack of adequate staffing for palliative and end-of-life care appears to have impaired positive outcomes for the improved quality of life for patients and their families. Only five formally qualified physicians and four formally qualified nurse specialists were registered as practicing PC in Nigeria in 2011 (Lynch et al., 2013), with no evidence that this number has increased in subsequent years. A Nigerian opinion article similarly acknowledged the shortage of manpower to be linked to the lack of a PC-training institution in Nigeria (Oyebola, 2017), which is also an indicator for policy action.

Overall, the terminally ill patients, their relatives, and staffs in this study seemed to have experienced greater impacts from distressing environmental stimuli arising from the architectural layout, interior design, and ambient features (including staffing shortage) in the studied hospital. The deprived physical environment signified a lack of place-making, or what may be termed as “nobody's business,” attributable to the national government and hospital managers not taking responsibility for creating an appropriate space for PC and end-of-life care. This idea is consistent with the third triadic element of Lefebvre's theory of space (Lefebvre, 1991). Lefebvrian analysis considers space to be fundamental to our lived experience, which Lefebvre termed “space of representation” or space of “inhabitants or users” (Lefebvre, 1991). In this research, all of the spaces used in the care of terminally ill patients were not homey in appearance but rather user insensitive and uninhabitable. Therefore, they did not serve the purpose for which they were intended in terms of enhancing quality of life. It could be said that the PC unit offered “space” for palliative and end-of-life care but not a “place” that could promote the well-being of the service users or enhance the happiness or job satisfaction of the healthcare providers. Although poor funding was mentioned by the managers as the reason for the poor environmental conditions, the conceptualization of PC as “dead-end” care appeared as a fundamental reason explaining why the managers of this hospital did not allocate funds received from the government for palliative and end-of-life care. This may be indicative of a culture and mindset that does not understand the value of providing care for terminally ill and dying patients.

It is interesting to note that, despite these unfavorable environmental conditions, the staffs continued to provide diverse services, as described in detail in another article (Agom, Ominyi, et al., 2020), and were resilient and devoted in providing care to their patients using available resources. Further research may explore the factors underpinning the lack of policies that promote evidence-based design in the construction/renovation of physical environment in the African context.

Study Contributions

This is the first study to reveal that inadequate physical space, equipment, and staff constitute environmental complexities negatively influencing palliative and end-of-life care

in a Nigerian context. This finding may be extrapolated to other similar cultural contexts. This research exposed that a hospital setting with unsuitable environmental conditions for PC directly conflicts with the aim of PC, as such environments undermine clinical outcomes and worsen the physical, social, psychological, and spiritual well-being of patients and their families and, thus, may discourage service utilization. The Nigerian government, international organizations, and other African countries may reference these findings to evaluate their respective palliative and end-of-life physical environments and make necessary modifications to improve related services. We argue that failure to adjust the physical environmental designs to suit the needs of PC providers and receivers will sustain the poor development of this service in Africa.

Study Limitations

This study was conducted in a single hospital, which reduces the generalizability of findings to the general population. However, given that no research in Nigeria has explored the effects of environmental influence on palliative and end-of-life care, obtaining in-depth information from one site in Nigeria may be considered a necessary first step toward comprehending this issue. One of the aims of qualitative research is to allow logical generalizations to build a theoretical understanding of a similar class of phenomena (Mackieson et al., 2019). Therefore, this study contributes to a theoretical understanding of the environmental realities related to the provision of palliative and end-of-life care, meaning that the findings may be extrapolated to similar healthcare settings and contexts. The lead author solely performed the fieldwork, which may introduce bias. However, regular discussions with the research team regarding the fieldwork and analysis were conducted to mitigate bias concerns and enhance the credibility of the findings.

Conclusions

The healthcare systems currently in place in Africa are a major contributor to health inequality. Our findings provide evidence that contributes to an understanding of the underlying factors that promote poor healthcare delivery, including PC, in Nigeria. This study found that inadequate physical environments in hospitals have negative psychological impacts on patients. In addition, the environmental needs of patient families and hospital staffs were neglected. Healthcare providers working in suboptimal environmental conditions (e.g., uncontrolled high room temperatures, inappropriate ward layouts, and shortages of equipment) experience increased work stress that likely reduces their satisfaction in providing care. Overall, the physical environment for palliative and end-of-life care may be perceived as a source of added distress experienced by patients, families, and healthcare providers. Blame culture is found to be a dominant discourse among the participants in this study (staff blamed the managers and managers blamed the government

for the poor physical environment conditions). Therefore, there is an urgent need for the national government and hospital managers in Nigeria to take responsibility for making the space for palliative and end-of-life care conducive and habitable for care providers, patients, and their families. This may be achieved by allocating funding to improve the physical environment not only for patients receiving palliative and end-of-life care and their families but also for the staff providing care to these patients. Specifically, an urgent refurbishment and redesign of existing spaced and improved facilities for patients, families, and staff caring for these service users is required. We also recommend that hospitals initiate a quality-of-care appraisal system by establishing a “continuous quality improvement” committee to monitor the quality of palliative and end-of-life care services.

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Author Contributions

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