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**AN ANALYSIS OF NONVERBAL COMMUNICATION BETWEEN NURSES AND
HOSPITALISED OLDER ADULTS IN SELECTED HOSPITALS IN CAMEROON**

By

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A thesis submitted in journal article and manuscript format in fulfilment of the requirements
for the degree Doctor of Philosophy

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January 2023

DECLARATION 1

I, Esther Lydie Wanko Keutchafo, student number 214584622, declare that:

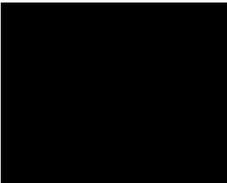
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DECLARATION 2

Published articles

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DEDICATION

This thesis is dedicated to God Almighty who enabled me to complete this study in good health, and to my family, who supported and encouraged me to complete this work after many years.

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DEFINITION OF OPERATIONAL TERMS

Andersen and Risør (2014) have conveyed the importance of contextualisation and how it relates to the notion of causality for eventual understanding and insight. Therefore, the following terms are operationally defined to assist in describing the context in which they were used:

Nonverbal communication: A variety of communicative behaviours that do not carry linguistic content. In other words, it is the process of sending and receiving messages to share knowledge, attitudes, and skills (Velentzas and Broni, 2014) without words. In this study, sign language and written communication are excluded. It is worth noting that researchers use the terms “nonverbal communication” and “nonverbal behaviours” interchangeably (Hall et al., 2019). The researcher does the same in this study.

Older adult: An individual who is aged 60 years and over. For this study, the United Nations cut-off of 60 years was considered in referring to the older adult population in Africa (Kowal et al., 2000), although in most upper-income countries, the chronological age of 65 years and older is accepted as a definition of an older adult (Zverev, 2013). However, specific socio-economic and disease parameters suggest that 65 years is not readily applicable to the African context (World Health Organization, 2016).

Nurse: An individual who has completed a three- or four-year bachelor of nursing programme at a university, or a three-year diploma in nursing programme in a nursing education institution. It also encompasses nurse aids, who are sometimes unit managers over diploma and degree nurses in some settings in Cameroon.

Nursing student: An individual who is registered full-time in a three- or four-year bachelor of nursing programme at a university, or a three-year diploma in nursing programme in a nursing education institution. It is hoped that the individual will be registered with the Cameroonian Nursing Council upon completion of the programme, but registration for practice was only introduced as compulsory in 2022.

Hospital setting: A healthcare structure within the three-level pyramidal Cameroonian healthcare system where people can be admitted as patients and receive medical attention. To date, there is no long-term care setting in Cameroon for older adults (World Health

Organization, 2017). Additionally, there is only one older adults unit in Cameroon (Essomba et al., 2021). Therefore, older adults go to any hospital for every medical need where they are mostly nursed in general wards, together with young and middle-aged adults, after diagnosis has been classified as a medical or surgical case. Further, there are out-of-pocket payments required to access all medical care, and there is no medical aid scheme for older adults who, mostly, do not receive retirement benefits.

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ACRONYMS AND ABBREVIATIONS

CFA: Confirmatory Factor Analysis

EFA: Explanatory Factor Analysis

GT: Grounded theory

KOP: Koagan's Old People

PCC: Patient-centred care

PCCom: Patient-centred communication

UKZN: University of KwaZulu-Natal

WHO: World Health Organization

PROLOGUE

I was standing beside the bed, and the older woman in it smiled anxiously at me. I still remember this moment quite clearly: my communication wake-up call. She wanted to talk to me but was afraid to disturb me because we all seemed to have so much to do, and she was right. Outside the open door, everyone was rushing up and down the corridor, going somewhere they needed to be. A usual day at the ward. The older woman had pushed the alarm button, like any other patient, and here I was answering her call. Nevertheless, as I stood there waiting to hear what she needed of me, she hesitated. She apologised for taking my time: ‘You all have so many other things to do, more important things’. I told her I was there for her, and that I had time for her, and still, she was reluctant to talk with me. She kept apologising, something that inevitably took time, never telling me what was bothering her, the reason I was standing there, waiting. Finally, it hit me: my body language. The nonverbal words my body was telling her; what my verbal words, saying the opposite and trying to comfort her, could not silence – I was short of time. Standing next to the door, a few feet from her bed, almost as if I had not yet entered the room, I was already on my way out. I felt ashamed for telling her she wasn’t bothering me at all, that I had time for her, all the while gesturing something else. I took a chair and sat down beside her bed, looked at her, and said ‘I do have time; tell me’. This example illustrates that communication is not easy. We might believe we take the time and respond in a way we intend to, and that we know what is expected of us. This is not always the case, however. Sometimes the organisation, our routines, or our resources can hinder us; sometimes, the obstacle to communication is ourselves. (Höglander, 2019).

ABSTRACT

Background: Nurse-patient communication has been recognised as one of the most important aspects of successful patient outcomes. In relation to older adults, whose numbers are growing worldwide, nurses' communication with older adults is essential because older adults will seek medical assistance more than before. Since most rely on nonverbal communication because of hearing deficits, and changes in attention and coding of information – all restrictions in interaction and effective verbal communication – nurses' nonverbal communication will be a vital skill to develop good nurse-older patient relationships. In a context where there are no long-term care settings, nurses will be required to achieve effective nonverbal communication when older adults are admitted to the wards.

Aim: This study aimed at analysing nonverbal communication between nurses and hospitalised older adults in selected hospitals in Cameroon, to develop a model for effective nonverbal communication between nurses and older adults.

Methods: A mixed-methods approach was used in this study. A total of 372 participants were included through overt, theoretical, and convenience sampling. To collect the qualitative data through participant observations and individual interviews, twenty-seven (27) nurses were observed, of which 13 nurses were interviewed, and 29 older adults were observed, of which eight (8) were interviewed. In addition, 316 nursing students participated in the survey. Qualitative data analysis was composed of open coding, axial coding, and selective coding, which were intertwined as the researcher moved back and forth between data collection and data analysis. Additionally, comparative analysis, theoretical sensitivity, and memos were used during the process of analysing the qualitative data. Quantitative data were analysed using SPSS version 25, where descriptive and inferential analyses were run. Additionally, an explanatory factor analysis based on the principal component analysis method with varimax rotation was conducted, to determine the common factors that explain the order and structure among measured variables.

Results: Firstly, the results showed that there was limited evidence of studies on nonverbal communication between nurses and cognitively intact hospitalised older adults in clinical settings. Secondly, the results showed that hospitalised older adults made both positive and negative interpretations of nurses' nonverbal communication. They also had specific nonverbal communication needs. Thirdly, the results showed that nurses mainly used haptics, kinesics,

and proxemics to communicate nonverbally with hospitalised older adults to build relationships with them, convey affection, reassure them, and support verbal communication. Further, the results showed that nursing students held slightly positive attitudes towards older adults; yet, the tool used to assess their attitudes showed moderate psychometric properties and two factor loadings. Finally, the results showed that the proposed model for effective nonverbal communication with hospitalised older adults, which emerged from the data, encompassed all six categories of Strauss and Corbin's framework, which are: causal conditions, contextual conditions, core phenomenon, action/interaction strategies, intervening conditions and expected outcomes.

Conclusions: This study revealed that nurses mainly use few nonverbal communication techniques to communicate with hospitalised older adults, which cannot achieve effective communication, vital in nurse-patient relationships. The proposed model provides a guide for effective nonverbal communication with older adults and acknowledges that older adults' interpretations and needs of nonverbal communication, as well as attitudes towards them, all influence effective nonverbal communication with hospitalised older adults. It is hoped that nurses will consider these to improve their nonverbal communication with hospitalised older adults for better patient outcomes such as: patient satisfaction, shorter lengths of stay in hospitals and improved quality of care.

CHAPTER ONE: INTRODUCTION

1.1 Introduction and Background

Global ageing is a trend, as people over the age of 60 years live longer and are healthier. Worldwide, older adults account for 1.05 billion people. Older adults accounted for 1 billion people, with 32 million in sub-Saharan Africa in 2019, and this figure is projected to reach 101 million by 2050, an increase of 218% (United Nations Department of Economic and Social Affairs Population Division, 2019). This makes the older adult population in sub-Saharan Africa the second most rapidly growing population of all regions globally (Naidoo and Van Wyk, 2019). In that region, the burden of older adults' diseases is growing, with more older adults requiring older adults health care services, with frequent hospitalisations and longer stays (Essomba et al., 2020, Naidoo and Van Wyk, 2019). With hearing deficits, changes in attention and the coding of information, restrictions in interaction and participation, as well as effective verbal communication (Forsgren et al., 2016), nurses' effective communication with older adults emerges as an essential skill in older adults care (Skoglund et al., 2018).

The word "communication" is derived from the Latin *communicare*, which means making an idea, a thought, or a feeling expand outward to the public (Abdolrahimi et al., 2017). Communication is the cornerstone of every human society and sustains social life (Ahmadi and Kiani, 2019). Communication is a multi-dimensional, multi-factorial phenomenon and a dynamic, complex process, closely related to the environment in which an individual's experiences are shared (Norouzinia et al., 2016). Regardless of age, without communication, people would not be able to make their concerns known or make sense of what is happening to them (Casey and Wallis, 2011). Communication is an essential aspect of people's lives (Daly, 2017) and is more complicated than the mere transmission of information (de Guzman et al., 2019). Communication can be defined as transaction and message creation which occurs in a specific context consisting of: physical space, cultural and social values, and psychological conditions (Mitchell and Hill, 2020). Communication has two main aspects: verbal communication and nonverbal communication (Sundler et al., 2020). The verbal aspect of communication is the interaction between people using noises or words (Croston, 2018). Nonverbal communication is defined as 'behaviour of the face, body, or voice minus the linguistic content; 'everything but the words' (Hall et al., 2019). It also includes how we behave, how we sound, and what is expressed by each individual (Blanch-Hartigan et al.,

2018). Nonverbal communication has different modalities, which include: haptics (the use of touch), artifacts (the presence of physical and environmental objects), proxemics (the use of space and distance), chronemics (the use and perception of time), kinesics (forms of movement of the body), vestemics (body type and clothing), listening, silences, and vocalics (aspects of the voice) (Boggs, 2015; Stanyon et al., 2016; Manuela et al., 2020).

Communication with patients has been proven to be crucial because it is one of the important aspects of caring for patients that affects all other aspects of care (Güner et al., 2018). Therefore, it should be effective. In healthcare settings, effective communication is the basis of any relationship, especially nurse-patient relationships (Windover et al., 2014). In the care of older adults, communication is important to understand older adults' needs and to support their health and well-being (Hafskjold et al., 2015). Effective communication with hospitalised older adults is an important part of nursing care and can present unique challenges. For instance, the effects of ageing, such as loss of sight and hearing, can make communication with older adults ineffective. However, when communication is effective, patients feel cared for, respected, and more able to describe their concerns (Jack et al., 2019). On the other hand, patients' negative experiences in their interactions with nurses would inevitably shape their subsequent communication with them, and patients would be less motivated to disclose their needs and feelings to nurses (Chan et al., 2018). Concerning older adults, effective communication with hospitalised older adults is an important part of nursing care and can present unique challenges. Although the importance of communication in healthcare has long been recognised (Chan et al., 2019), special attention needs to be directed to nonverbal communication. Words express only a part of the message being communicated, with the rest of the message conveyed by gestures, tone, and attitude (Lambrini and Loanna, 2014).

While nonverbal communication is necessary for effective nurse-patient interactions, this is seldom discussed in the nursing literature (James et al., 2020). Additionally, the current understanding of nonverbal communication with older adults relies largely on evidence from non-African countries. Yet, there is a call for more data to understand the needs and the status of older adults in Africa (United Nations Population Fund, 2016). Because it is imperative to forge responses to the challenges that come with ageing populations (He et al., 2020), one of the strategies is to ensure effective nurse communication skills with older adults (Skoglund et al., 2018). To date, there are few nonverbal communication models identified to help nurses to communicate effectively with patients let alone older adults. The first is SOLER (Square,

Open, Lean, Eye contact, Relax), developed in 1975 by Egan to describe the most effective body language to employ to make others feel listened to. It only includes proxemics (use of space) and kinesics (movements of the body), and mostly focuses on interactions during a consultation, not during hospitalisation (Egan, 1990). The second model is SURETY (Sit at an angle, Uncross legs and arms, Relax, Eye contact, Touch, and Your intuition), which criticises and advances the SOLER model by including the use of touch, emphasising the importance of individual intuition, and encouraging the inclusion of therapeutic space (Stickley, 2011). Although it includes proxemics, kinesics, and haptics, it has been developed to encourage the inclusion of therapeutic space and intuition in verbal communication skills content. None of these models was intended for effective nurses' nonverbal communication with older patients, nor were these models derived from the participants' views on nonverbal communication between patients and nurses, though, a model which considers nurses' views is more likely to be appropriate and acceptable to the nurses (Atieno Wagoro and Duma, 2021); healthcare workers' perspectives are important in determining effective strategies (Batalden et al., 2016). As some of these older adults mostly rely on nonverbal communication because of their functional impairments (Gorawara-Bhat et al., 2017), nurses need to be equipped, more than before, with tools to improve their communication skills. Although communication skills training and models do not necessarily ascertain that nurses will be skilled communicators (Salmon and Young, 2011), they might help assist nurses to improve their nonverbal communication with the older adult population.

1.2 Problem Statement

Population ageing is one of the key issues that consistently features in the development agenda of many countries. Cameroon has reported an increased life expectancy of 10 years between 1950 and 2015. In 2021, life expectancy in Cameroon for males was 59 years and for females 62 years (World Bank Group, 2021). Although there are only 4.2% of older adults in Cameroon, more people will live longer. However, the Cameroonian health system is ill-prepared to meet the healthcare needs of the ageing population (Ntsama Essomba et al., 2020). There are not available tools to guide geriatric nursing in Cameroon. Furthermore, there is a paucity of health services dedicated to older adults, and few personnel are trained in older adults care. Training in older adults care is not included in the residency program of the country and the General Medicine training curriculum lacks specific courses in older adults (Essomba et al., 2021). As of 2018 in Cameroon, the growing older population is translating to increased

healthcare demand (Essomba et al., 2020). Unlike other African countries such as Mauritius, Seychelles, and South Africa, there is no national effort to develop long-term care settings (World Health Organization, 2017). As a result, older adults solely utilise hospital settings when requiring medical assistance (Emeh, 2020; Gallo, 2019), where nurses communicate more often with them. Additionally, Cameroon is one of the most linguistically fragmented countries in sub-Saharan Africa, with about 250 indigenous languages, apart from English and French, which are both considered official languages (Chiatoh, 2014). As a result, it is less likely that a nurse speaks the same vernacular as an older patient who does not speak French or English. Norouzinia et al. (2016) asserted that effective communication could not be established when nurses and patients have a language difference. This places nonverbal communication as an important component of care. In Cameroon, where most research on older adults is mostly biological and is focused on curing age-related disease or preventing the incidence of a particular condition (Naah et al., 2020), this study, which analyses nonverbal communication between nurses and hospitalised older adults, proposes a model for effective nonverbal communication. The outcomes of the study can, consequently, improve the nursing care rendered.

1.3 Study Purpose

This study intended to analyse nonverbal communication between nurses and hospitalised older adults to develop a model for effective nonverbal communication between nurses and hospitalised older adults in Cameroon.

1.4 Study Objectives

The research objectives of this study were:

- To establish the evidence of nonverbal communication between nurses and hospitalised older adults in the existing literature.
- To determine the nonverbal communication needs of hospitalised older adults in the selected clinical settings.
- To determine hospitalised older adults' interpretation of nurses' nonverbal communication in the selected clinical settings.
- To identify the nonverbal communication behaviours and methods used by nurses to communicate with hospitalised older adults in the selected clinical settings.

- To determine the attitudes of student nurses towards older adults in the selected schools.
- To develop a model for effective nonverbal communication between nurses and hospitalised older adults.

1.5 Research Questions

The research questions of this study were:

- What is the evidence of nonverbal communication between nurses and hospitalised older adults in the existing literature?
- What are the nonverbal communication needs of hospitalised older adults in the selected clinical settings?
- What are the hospitalised older adults' interpretations of nurses' nonverbal communication in the selected clinical settings?
- What are the nonverbal communication behaviours and methods used by nurses to communicate with hospitalised older adults in the selected clinical settings?
- What are the attitudes of student nurses towards older adults in the selected schools?
- What model for effective nonverbal communication between nurses and hospitalised older adults can be developed?

1.6 Research Methodology

This study adopted a mixed-methods approach. Advocates of this approach argue that the complexity of contemporary research problems necessitates a research methodology that combines the results of quantitative studies with qualitative studies (Creswell & Plano Clark, 2018). This section perspective will display the research paradigm, approach, method, settings, and population, as well as the data collection, analysis, management and disposal, ethical considerations, and academic rigor of this study.

1.6.1 Paradigm of the Study

This study was underpinned by pragmatism, which is the philosophical underpinning for mixed methods (Creswell, 2014; Polit and Beck, 2017), and creates a wide variety of options to solve nursing problems (Jackson, 2015). In addition, pragmatism opens the door to multiple methods as well as different forms of data collection and analysis (Creswell, 2014). Further, pragmatism

acknowledges multiple perspectives emerging from people's actions, and views reality as consisting of fluid indeterminate processes (Chamaz, 2009). Pragmatism seemed to be appropriate in this study because effective nonverbal communication emerged from nurses', student nurses', and older patients' perspectives.

1.6.2 Research Approach and Design

The approach selected for this study was a mixed-method approach, with the qualitative part being dominant. Among the three types of basic mixed-methods designs, namely exploratory sequential, explanatory sequential, and convergent designs (Guetterman, Fetters, and Cresswell, 2015), the convergent design was chosen. This is because the researcher did not aim at building to the subsequent quantitative phase from the qualitative phase nor at informing the follow-up qualitative phase from the quantitative phase. That is why the researcher collected and analysed quantitative and qualitative data concurrently but separately. To get prepared for her role as mixed-method researcher, the researcher was helped through mentoring, online support, and workshops organized by the University.

Additionally, prior to data collection, the researcher took key decisions regarding the level of interaction between the quantitative and the qualitative components, the priority design, the timing of both designs, and about where and how to mix quantitative and qualitative designs as suggested by Creswell (2014) and Morse (2016). Practically, the researcher collected both quantitative and qualitative data concurrently but separately. One set of data did not depend on the results of the other. Secondly, the two sets of data were then analyzed separately and independently from each other. Thirdly, the results of the quantitative data were merged with the qualitative data. The findings from the quantitative part (related to attitudes towards older adults) were mentioned by the participants as one of the intervening conditions in the model. Fourthly, the researcher interpreted that the two sets of data converged and complement each other for a better understanding of the model.

1.6.2.1 Grounded theory

The Grounded theory (GT) approach was a suitable style of research because there was little prior information about the topic (Albina, 2016). It was thus ideal for this study because of the dearth of knowledge of nonverbal communication between nurses and older adults in clinical settings. GT was also chosen because it is a useful methodology for the study of interpersonal

activities between nurses, patients and others (McCann and Clark, 2003). It is worth noting that among the three types of GT described by Chun Tie, Birks and Francis (2019), namely traditional GT, evolved GT and constructivist GT, evolved GT was chosen. This is because evolved GT relies on the symbolic meaning people ascribe to the processes of social interaction, like nonverbal communication.

GT is an approach to collecting and analysing qualitative data to develop theories that are grounded in data from real-world observations or empirical data (Polit and Beck, 2017). It is a qualitative method that focuses on basic social processes and involves systematically collecting and analysing data with the expectation that the theory will emerge. GT also aims to understand reality from the perspective of the meaning people attach or attribute to certain contexts or objects, so to generate knowledge, improve understanding, and provide an essential guide for action (Morse, 2001). GT, therefore, was proposed by the researcher to assist in the development of a model for effective nonverbal communication with hospitalised older adults, using data inductively obtained from nurses and older adults. In keeping with GT, the researcher used simultaneous data collection and analysis, and constructed analytic codes and categories from data by using open, axial, and selective coding, but not from preconceived logically deduced hypotheses. The researcher used the constant comparative method, and used memo-writing to elaborate categories, specified their properties, defined relationships between categories, and identified gaps.

1.6.2.2 Cross-sectional Survey

Cross-sectional studies occur at one point in time and can be considered a snapshot that gives a picture of what the researcher wants to study at a given time in the surveyed locations (Connelly, 2016). A cross-sectional design over a longitudinal design was chosen because the aim was not to seek any changes in students' attitudes towards older adults over time. The focus was assessing their attitudes during the period of data collection. In addition, cross-sectional designs are inexpensive and flexible, and they can cover many different areas of human behaviour in many populations (Polit and Beck, 2017), yet missing data can be problematic (Connelly, 2016).

1.6.3 Study Settings

1.6.3.1 Description of the Country

This study was conducted in Cameroon, in two geographical regions. Cameroon is a lower-middle-income country at the heart of the Gulf of Guinea in Central Africa. It extends from the Atlantic Ocean in the South to Lake Chad in the North. It is bordered in the north by the Chad Republic, to the east by The Central African Republic, to the south by Gabon and Equatorial Guinea, and the west by Nigeria. It has more than 230 ethnic groups spread over ten administrative regions. French and English are the two official languages. However, French is the most used language (eight of 10 regions are French-speaking). Cameroon has experienced many reforms over the decades (Nzima, 2014). The Cameroonian health care system aims to improve the health of the population by scaling up accessibility to quality and integrated care with the full participation of communities in the management and financing of health activities (Ngah et al., 2013). Cameroon has a pyramidal public healthcare sector, with a centralised system of administration (Ministry), an intermediary level (regional delegations), and a peripheral level (health districts) (Tandi et al., 2015). It involves three sub-sectors: the sub-public sector, the sub-private non-profit and profit sectors, and the sub-sector of traditional medicine (Ngwakongnwi et al., 2014).

Cameroon is among the African countries currently experiencing a crisis in human resources for health. The major causes of this crisis include, not only the poor production and recruitment planning of health personnel, but also shortcomings related to their management (Ngah et al., 2013). In confirmation of this, the researcher found that nursing teams were often made of one nurse in the regional and tertiary hospitals. In addition, the nursing profession in Cameroon faces many challenges. The chaotic workforce and education, the dysfunctional nursing regulations, the lack of funding and other resources for nursing research, and the lack of a directorate of nursing (Atanga, 2012) are some. Nurses in Cameroon work under poor conditions. Most significantly, they have low salaries (Amani, 2010). Yet, some nurses had to use their low salaries to help needy hospitalised older adults because there are out-of-pocket payments in public and private hospitals for those who do not have private medical aid schemes.

With regards to the older adult population in Cameroon, there were 1,141.43 people aged 60+ years in 2020, an increase of 2.69% since 1971. Many go to a hospital for various health issues,

and most of them live with chronic illnesses and/or disabilities (Essomba et al., 2020). In addition, most older adults have no medical insurance and are financially vulnerable. They go to health facilities that are not age-friendly environments, and most rely mainly on family solidarity support to afford healthcare (Essomba et al., 2021).



Figure 1: Map of Cameroon

1.6.3.2 Description of the Study Settings

The selected clinical settings are healthcare facilities at the secondary and tertiary levels of the Cameroonian healthcare pyramidal system. The two hospitals were selected because it was expected that at these levels of the pyramidal healthcare system, there are some standards for nursing care in those settings. The first hospital is a tertiary-care hospital, created in 1933 as a day facility, but now offers twenty-four-hour a day (24/7) care, and serves as a university teaching hospital for undergraduate and postgraduate students in the political capital (Agbor et

al., 2014). It is currently one of the largest state-owned, low cost, easily accessible hospitals in Cameroon with a capacity of 650 beds (Agbor et al., 2018). Although it has several medical specialties, it has the only functional unit dedicated to older adults care in the country, created in 1999 (Essomba et al., 2021). The second hospital is a secondary-care hospital, created in 1992 in the Eastern Region of Cameroon. It has several medical specialties but no older adults dedicated unit. It has a capacity of 233 beds. The selected nursing schools are private schools of nursing, accredited by the government. The two schools were selected because of the variety of programs from which students could be recruited. The first one was created in 1959 and offers diploma, degree, master degree, and Ph.D. programmes in nursing. The second school was created in 2016 and offers a two-year programme in geriatric nursing for diploma nurses.

1.6.4 Study Population and Sampling

For the qualitative part of the study, 56 participants were included in the study. They were 20 nurses, seven (7) nursing students, and 29 hospitalised older adults, who agreed to be observed, of which 13 nurses, four (4) nursing students, and eight (8) hospitalised older adults agreed to be interviewed. Ten (10) nurses – five (5) nurses from each hospital – were recruited to participate in the study for overt participant observation by using open sampling, which is the first sampling method in GT (Corbin and Strauss, 2015). These were nurses with nursing experience, who could articulate in English or French, were involved in the day-to-day care of older adults admitted to the hospital, and demonstrated a willingness to participate in the study. The eligible nurses were approached and gave their consent to be overtly observed and interviewed during, and about, their interactions with hospitalised older adults. Further, theoretical sampling was used to identify and follow clues from the initial analysis, clarify uncertainties, fill gaps, check hunches, and test interpretations as the study progressed (Chun Tie et al., 2019). Those nurses with experience, who could articulate in English or French, and were involved in the day-to-day care of older adults admitted to the hospital, were sampled. This was because there were nurses with less than two years' experience, who were communicating with older adults; student nurses, who were on clinical placement; as well as nurse managers who sometimes cared for hospitalised older adults. These were: two (2) middle unit managers, four (4) undergraduate student nurses allocated for clinical placement in the selected hospitals, and one (1) nurse assistant. Additionally, 47 older adults were referred to the study, but 13 did not meet the eligibility criteria. These were: proficiency in English or French, being in a noncritical condition, and voluntary participation. Of the 34 older patients

who met the inclusion criteria, 29 gave their consent to be observed, of whom eight (8) were interviewed thereafter.

For the quantitative part of the study, a total of 396 questionnaires were distributed but only 316 were returned; meaning that, 316 students from two nursing schools were included in the study – a response rate of 79.8%. Twenty (20) students were part of the pilot test and were not included in the final results, while 199 students were enrolled in a degree programme, 86 were enrolled in a diploma programme, and 11 were enrolled in an older adults programme. The summary of the sampling and sample sizes is displayed in table 2.

Table 1: Summary of Sampling and Sample Sizes

Method	Type of sampling	Number of participants
Quantitative component	Convenience sampling	316 nursing students
Qualitative components	Open sampling	20 nurses
		29 older adults
	Theoretical sampling	Two (2) middle-unit managers Four (4) nursing students One (1) nurse assistant

1.6.5 Data Collection

In this study, multiple methods of data collection were employed namely: in-depth face-to-face interviews, document analysis, reflective journals, focus group discussions, and field observations (Corbin & Strauss, 2014). In this study, data collection was intensified using multiple data sources.

1.6.5.1 Participant Observations

Observations are useful, as persons usually say they are doing something, but in reality they are doing something else (Corbin and Strauss, 2008b). Data collection commenced with a month-long period of overt observations of interactions between ten (10) nurses and hospitalised older adults. The researcher observed, using a guide, how these nurses communicated nonverbally with older adults during different types of interactions (see annexure 1). The interactions included nursing care related tasks, social interactions, and health

education. The observations were recorded as field notes promptly after each observation, because the researcher was not granted permission to video record. An observation guide, which consisted of a set of questions under the rubric ‘What is going on here?’ as suggested by Corbin and Strauss (2015), gave structure to the note-taking. Thereafter, there was an immediate rewriting of each observation while the event was still fresh in the memory. Data analysis of the observations guided the development of the first interview guide (see annexures 2-5), which was refined throughout data collection, and was used to conduct individual in-depth interviews with nurses.

1.6.5.2 Individual Interviews

In this study, individual interviews were conducted with nurses, hospitalised older adults, and nursing students after the observations. Nurses and student nurses observed using effective nonverbal communication with hospitalised older adults were approached for further participation in the study, though only when they seemed not too busy, for example, by the nurse’s station or during lunch breaks. Thereafter, dates and times for the interviews were arranged. The initial interviews were informed by the analysis of observations, as the interview with each participant was related to the captured observations of the interactions with hospitalised older adults. The interviews informed each other, as each interview was transcribed and analysed immediately to inform subsequent interviews and theoretical sampling, which allowed the generation of increasingly focused, but not leading, questions for subsequent interviews (Charmaz, 2014). The first open-ended question asked of each participant was, “How do you define nonverbal communication with hospitalised older adults?” This was followed by probing questions, which allowed for more clarity about the observations captured and the emerging concepts. Also, when a concept emerged from the analysis, it was included in the subsequent interviews. For instance, when the comment "older adults are like children" came from one participant, that question was then added to the subsequent interviews. Fourteen (14) interviews were conducted in French, while only three (3) interviews were conducted in English, because French is mostly spoken in these two regions of Cameroon. Interviews, which lasted about 60 minutes, were conducted at the time most convenient for the participants in the nursing station. Interviews were continued until data saturation of thirteen (13) nurses and four (4) student nurses was achieved.

Additionally, the researcher followed the same principles to recruit older adults for interviews. They were individually approached at the bedside when they seemed free, with no visitors nor care activities happening. The researcher introduced herself, explained the purpose of the study, and sought consent for participation in the study. Older adults who consented to participate in the study would either agree to be interviewed on the spot or prefer to make an appointment for a different time. The initial interviews with older adults captured their interpretation and understanding of nurse nonverbal communication. One open-ended question was asked, namely, "How well do you understand when a nurse communicates with you without saying a word?" This was also followed by probing questions for more clarity and to obtain additional information. The interviews with older adults also informed each other. Field notes were taken during and after the interviews. Data saturation was achieved at interview eight (8) when no additional information emerged.

1.6.5.3 Questionnaire

To determine nurses' attitudes towards older people, self-administered questionnaires were used. In this study, the original English version (see annexure 6) and the French version (see annexure 7) of the Kogan's Old People (KOP) scale were used. Questionnaires were distributed in a lecture to all the students present and willing to participate in the study. The researcher was assisted by two assistants. Nurse educators in charge of each class were approached for the recruitment of respondents. They checked the week's schedule and suggested the best time for data collection. Students who agreed to participate in the study were first given a written letter of information and a consent form. They were then given a self-administered questionnaire in French or English, completed it on-site, and returned the completed questionnaires, at the end of the lecture, by placing them in a box. The researcher's presence allowed respondents to ask questions to maximise the number of completed questionnaires (Polit and Beck, 2017).

It is worth noting that there are numerous scales to determine nurses' attitudes towards old people: the KOP (Kogan 1961), the Aging Semantic Differential (Rosencranz & McNevin 1969), the Facts on Ageing Quiz (Palmore 1988), the Aged Inventory (Knor & al. 1995), the Perceptions of Working with Older People scale (Nolan & al. 2001), and the McLaffery's scale (2005) (Liu et al., 2013). The KOP scale was the first one to be developed (Urbanová and Bužgová, 2017), and has been chosen in this study to assess the student nurses' attitudes

towards older people for two main reasons. Firstly, its validity and reliability have been proven in English (Erdemir et al., 2011), and in its various translated versions: Turkish (Kiliç and Adibell, 2011), Swedish (Engström and Fagerberg, 2011), Japanese (Ogiwara et al., 2007), Israeli (Topaz and Doron, 2013), Italian (Matarese et al., 2013), and Chinese (Yen et al., 2009). Secondly, a translated French version, whose validity and reliability have also been established (Dubé, 2012), has been found. The KOP scale is a Likert-type scale that comprises a set of 17 positive items that are the reverse of the 17 negative items that make unfavourable references to old people (Kogan, 1961). The items cover three domains: personal appearance, resemblance, and nature of interpersonal relations across age generations (Runkawatt et al., 2016). The scale measures stereotypes of the aged and people's image of older adults (Runkawatt et al., 2016; Urbanová and Bužgová, 2017).

1.6.6 Data Analysis

The qualitative data and the quantitative data were analysed as described below.

1.6.6.1 Qualitative Data Analysis

Qualitative data analysis followed the guidelines for analysing qualitative data as proposed by Corbin and Strauss (2008b). To analyse the data, the French interviews were translated into English by a certified translator (see annexure 8). Then, the written texts of the observations and the interviews were broken into detailed pieces, while the interviews were transcribed verbatim. Data analysis was composed of open coding, axial coding, and selective coding, which were intertwined as the researcher moved back and forth between data collection and data analysis. In keeping with GT, data collection and analysis work in a “circling spiral manner”; each interview was transcribed and analysed before the next interview took place. The researcher used NVIVO version 12 qualitative data analysis computer software to import transcripts, write memos, code conceptual categories, properties and dimensions from the data, conduct data analysis, and refine the model.

The data were initially coded sentence-by-sentence during open coding to summarise and define emerging categories, paying special attention to the processes linking them. This was followed by axial coding, where data were reassembled, and codes were refined and categorised into categories and subcategories (Corbin and Strauss, 2008a). This allowed for a better understanding of the categories, with similar ones merged into higher-order categories.

After creating concepts and categories from data in the open coding phase, the researcher continued to group categories and subcategories in the axial coding phase. Then, the researcher developed a category by specific conditions, context, actions or interactions, and outcomes, by which the category was managed (Goulding, 2002). The researcher further refined a list of categories by carefully trying to merge or delete some of them after making possible connections. Categories were linked depending on their properties and dimensions. Some categories were named in words and phrased by the participants, while others were renamed by the researcher' academic and professional knowledge and readings. These concepts are referred to as 'literature-driven concepts' (Strauss and Corbin, 1990). The researcher continued to code new data, re-examined, and compared it, until saturation was reached. Selective coding followed axial coding, which involved the process of selecting the core category, "Effective Nonverbal Communication", systematically relating it to other categories, validating those relationships, and filling in categories that needed further refinement and development following the process of reduction and comparison. The iterative nature of the data analysis process allowed the researcher to repeatedly ask questions while studying the data, in addition to using the 'waving a red flag' technique, which allowed them to look beyond the obvious in the data (Corbin and Strauss, 2015). The researcher was convinced that the model began to emerge as soon as the diverse properties began to integrate.

Additionally, comparative analysis, theoretical sensitivity, and memos were used during the process of analysing the data. The comparative analysis helped to generate conceptual categories and their properties, hypotheses, or generalised relations among the categories and their properties as elements of the model (Glaser and Strauss, 2008). Comparative analysis was achieved through constant and theoretical comparisons. Constant comparisons involved comparing incident with incident (Corbin and Strauss, 2008b) and entailed breaking data into manageable pieces to be compared for similarities and differences, then grouping the concepts to form categories or themes. Each category was developed in terms of properties and dimensions (Corbin and Strauss, 2014). Theoretical sensitivity, which is one of the issues to be taken into consideration when using GT (Birks and Mills, 2015), gives researchers insight and makes them able to notice relevant issues. Theoretical sensitivity is related to what researchers know, their personal and temperamental bent, and their ability to have theoretical insight into the research area, combined with their ability to make something of their insights (Glaser and Strauss, 2008). It is gained by looking at the phenomenon from multiple vantage points, making

comparisons, following leads, and building on ideas (Chamaz, 2006). Finally, memos, which are combinations of the researcher and the data interacting together to explain what is going on (Corbin, 2009), helped to analyse the data and the codes at the early stage of the research process (Chamaz, 2006). The researcher started writing memos at the early stage of the data collection on the following: how she related to the participants and the phenomenon, the research questions, the code choices and their operational definitions, the emergent patterns, categories, themes and concepts, the possible networks, an emergent model, and any problems in the study. The memos were coded and analysed according to their content (Saldana, 2009). They helped raise the data to a conceptual level and developed the properties of each category (Holton, 2008).

1.6.6.2 Quantitative Data Analysis

Quantitative data were analysed using the Statistical Package for Social Scientists (SPSS) version 25. Questionnaires were assigned an identification number. The coded data were captured on the computer. Frequency distributions, measures of central tendency, and measures of dispersion were presented in tables. The following analyses were performed: a bivariate analysis of attitudes with all study variables using the t-test for continuous data, the chi-square test for categorical data, and the one-way ANOVA for categorical variables with more than two categories. To determine the attitudes of students towards older adults, the negative and positive statements, randomly ordered on the questionnaire, had scores that ranged from 17 to 85 respectively. To obtain a negative score, the summing up of the negative answers was calculated separately from positive ones. Before calculation, the negative statements were reversed, which contributed to a higher score on the negative scale, indicating an unfavourable attitude toward older adults. A higher score on the positive scale indicated a favourable attitude toward older adults. A total score ranging from 34 to 170 was obtained by adding the scores from both the 17 negative statements and 17 positive statements (Engström and Fagerberg, 2011). It was expected that nurses would have positive or negative nurses' attitudes towards older adults; it was found that students had slightly positive attitudes.

Concerning the psychometric properties of the French version of the KOP scale, descriptive statistics were performed to describe the sociodemographic characteristics of each of the respondents. Content validity was established through explanatory factor analysis (EFA) based on the principal component analysis method with varimax rotation, to minimise the number of

variables that have high loadings on a factor. An EFA was conducted instead of confirmatory factor analysis (CFA) because there is no record of an EFA conducted with the French version of the scale. Therefore, it was not possible to test the consistency of the factor structure with the French version, or to determine how well the theoretical model of factor loadings fitted the actual data through a CFA, without knowing the common factors that explain the order and structure among measured variables. However, the researcher recommended that a CFA is conducted to identify latent constructs responsible for the variation of measured variables for theory building.

1.6.7 Trustworthiness

Irrespective of the research paradigm, any researcher needs to address four trustworthiness concerns, according to Guba (1981). These issues are: true value, applicability, consistency, and neutrality. According to the naturalistic view, those concerns are defined as credibility, transferability, dependability, and conformability. On the positivist side, the issues are called validity and reliability (Guba, 1981).

1.6.7.1 Rigour for the Qualitative Component of the Study

Shenton (2004) and Guba (1981) proposed strategies to ensure rigour and these were adhered to in this study.

1.6.7.1.1 Credibility

Credibility refers to the confidence that should be placed in the truth of the research findings (Anney, 2014), and the confidence that data have accurately recorded the phenomena under investigation (Shenton, 2004). To ensure credibility in this study, prolonged engagement and member checks were achieved. Concerning *prolonged engagement*, the researcher developed an early familiarity with the participants' organisations by consulting appropriate documents and by visiting the different settings before data collection. Also, prior to observations, the researcher spent two weeks in each ward to familiarise herself with the ward and the nurses. The researcher collected data from February 2018 to January 2019, allowing for a long immersion in the data. Concerning *member checks*, the researcher confirmed what she observed during interviews with the nurses, encouraged honesty in participants during data collection, used iterative questioning and not leading questions, and allowed member checking during

regular debriefing sessions. Additionally, the researcher went back to nine (9) of the participants with the corresponding transcripts to check if the theoretical construction generated, matched the participants' intended meaning and used the participants' actual words in the model.

1.6.7.1.2 Transferability

Transferability is the potential for extrapolation (Polit and Beck, 2017); the degree to which the results of qualitative research can be generalised or transferred to other contexts or settings (Graneheim and Lundman, 2004) with other respondents (Anney 2014). It is worth noting that one GT study can never be similar to another one because the participants, the researcher, and the time of data collection are different (Stern, 2009). In this study, a rich, thick and comprehensive description of the information related to the number of organisations taking part in the study and where they were based, was provided. Any restriction affecting: the type of people who contributed to the data; the number of participants involved in the fieldwork and the response rate; the data collection methods that were employed; the number and length of the data collection sessions; and the period over which the data were collected, were also thoroughly described. In addition, a clear and distinct description of the context, selection, and characteristics of participants, as well as the process of data analysis was provided. Finally, a rich and vigorous presentation of the findings, with appropriate quotations, and the results, with tables and figures, were given. The researcher also ensured *purposive sampling* by choosing the key informants in the study sites believed to be knowledgeable of the issues under investigation as described under the study population and settings.

1.6.7.1.3 Dependability

Dependability is about enabling a future investigator to repeat the study (Shenton, 2004). In this study, dependability was ensured by data quality checks. This was done by consultation with experts in GT, following all the decisions taken during every step of the data analysis and interpretation. Also, the researcher consulted two senior qualitative researchers for peer review of the identification, development, and refinement of codes. Furthermore, comments from reviewers of the published papers were effected and added to this report. Finally, the researcher specified how and why more participants were selected (theoretical sampling) and provided information such as research design and its implementation, as well as operational details of data collection.

1.6.7.1.4 Conformability

Confirmability refers to objectivity (Polit and Beck, 2017); the degree to which the results can be confirmed or corroborated by others (Anney, 2014) to ensure that the results reflect the understandings and experiences of observed participants (Wahyundi, 2012), and not the researcher's preferences (Shenton, 2004). To ensure conformability, the researcher presented results that are not her views about the study, but a neutral reflection of the interpretation of the data obtained from participants. In addition, the researcher kept a reflective journal with detailed field notes written immediately after each data collection session, memos written during data analysis, tape recording interviews, transcripts, and translations, which is available for audit checks.

1.6.7.2 Rigor for the Quantitative Component of the Study

1.6.7.2.1 Validity

Validity is sought to ensure that the study measures or tests what is intended (Shenton, 2004). To ensure internal validity in this study, a pilot study was conducted. While the English and the French versions of the KOP scale were found to be valid and reliable and have been used in other nursing populations, none of them had previously been used in the Cameroonian context. Therefore, a pilot study was conducted, before data collection, with a sample of 20 nursing students, according to the stipulated eligibility criteria. The results showed a value of 0.72, which was deemed valid.

1.6.7.2.2 Reliability

Reliability refers to the strive to obtain similar results if the study were to be repeated, in the same context, with the same methods, and with the same participants (Shenton, 2004). Reliability is provided as a correlation measure between 0 and 1, and the closer the measure is to 1, the higher the correlation (Polit and Beck, 2017). A Cronbach's Alpha test was run to determine the reliability of the two versions of the KOP scale in this study. A value of 0.61 and 0.62 were obtained for the French and the English versions of the scale respectively. The tool was deemed moderately reliable and explanatory factor analysis was performed to explain the low value obtained with the French version. It was found that the sample size (N = 296) was not big enough, that the items in the scale were not marvelously homogenous, and were

measuring more than one factor, and that the two factors extracted were weakly correlated. It was, therefore, suggested that the French version be revised. It was also suggested that the original version of the KOP scale be revised, as it was designed in 1961 in America, with different societal values and beliefs than Cameroon in the 21st century.

1.6.8 Ethical Considerations

In this study, the following ethical principles were adhered to:

1.6.8.1 Community Participation

This study of nonverbal communication between nurses and older patients involved nurses and nursing students in a clinical placement in one (1) regional hospital, one (1) central hospital, and two (2) nursing education institutions in Cameroon. The researcher worked with her supervisor, a research assistant, and two GT experts to analyse the data. The hospitalised older patients, who agreed to participate in the study, were also part of the study.

1.6.8.2 Social Value

Data were collected from questionnaires and interviews with the nursing students, nurses, and older patients who agreed to participate in the study. Data were analysed to obtain a better understanding of nonverbal communication between nurses and older patients in the selected hospitals, to develop a model for effective nonverbal communication with hospitalised older adults in a context where there are no long-term care settings. It is hoped that the study will influence and benefit nurses in Cameroon, as well as the older adults who are admitted to these hospitals in search of medical assistance. Revealing the features of nonverbal communication with older patients can raise awareness of the importance of nonverbal communication. This model can also help nurses to improve their nonverbal communication skills with older adults, reduce negative attitudes towards older people, and generally improve older adults care.

1.6.8.3 Risk-benefit Ratio

There were no foreseeable potential risks related to the study participants inherent in this study. The benefits to the nursing profession in Cameroon and the body of knowledge in nursing outweighed the risk to individual informants. Participants' names and identifying aspects were not disclosed at any given time. Numbers were assigned to the participants and identification

codes were assigned to completed questionnaires. However, information such as sex, age, years of experience as a manager, and qualification were disclosed for analysis. Also, there was no cost to the informants and the researcher ensured that no participant was subject to any harm. Specifically, the researcher ensured that participants lost neither their privacy, nor their time, and were not emotionally embarrassed during interviews.

1.6.8.4 Independent Ethics Review

The researcher obtained ethics approval from the Humanities and Social Sciences Research Ethics Committee of the University of KwaZulu-Natal (UKZN) (HSSS/2008/017D) (see annexure 9), the researcher also obtained permission to conduct the study from the two hospitals and the two schools before data collection (see annexures 10-13).

1.6.8.5 Informed Consent

To obtain the consent of the informants, an information letter in English (see annexures 15 and 17) or in French (see annexures 16 and 18), along with the authorisation for audio recording in English, were given to participants before asking them to sign the informed consent form in English (see annexures 19 and 20) or in French (see annexures 21 and 22). The researcher answered questions asked by participants before obtaining their consent. No participant was forced or tricked into participating in the study. Those who declined their consent were not discriminated against.

1.6.8.6 Respect for Recruited Participants and Study Communities

The informants were informed that they could withdraw from the study at any time without being penalised. The researcher safeguarded the confidentiality and anonymity of the participants by ensuring that the names of the selected hospitals and schools, the audiotapes, transcripts, translations, and completed questionnaires were restricted to the researcher, research assistant, and supervisor. The researcher made it clear to the participants that their names would not be used for any purposes during or after the study.

1.6.9 Data Management and Dissemination of the Results

The researcher stored all data related to the research work on her personal computer which was password protected. Audio-recordings of individual interviews, along with field notes,

transcripts, and translations were kept safely in a locker, housed in a secured office, and accessible only to the researcher and her supervisor. In addition, after the data capture, the completed questionnaires were scanned, and the hard copies were shredded. The data generated from this study will be kept securely for five years according to the UKZN policy. After this period, all data will be shredded.

Concerning the dissemination of the results, the study findings have been published in peer review accredited journals. A hard copy of a bound thesis will be made available to the UKZN library after examination. Each hospital will receive a hard copy of the final report. The researcher will write more papers and present the findings at conferences locally and internationally.

1.7 Significance of the Study

This study aimed at analysing how nurses communicate nonverbally with hospitalised older adults, and, using these findings, to develop a model to guide effective nonverbal communication with hospitalised older adults in Cameroon. Firstly, this study adds to the body of knowledge on nonverbal communication between nurses and patients. It also answers the United Nations' (2016) call for more data on older adults from low-and-middle-income countries. This study also provides a tool to help nurses communicate more effectively with older patients, who mostly rely on nonverbal communication. The improved communication with older adults is expected to improve the quality of care rendered, and the reputation of clinical settings. Furthermore, the study provides a basis for future research in this under-researched area. Finally, the results of this study have been published in accredited journals for larger dissemination of the findings.

1.8 Format and Outline of the Thesis

This research report is a scholarly manuscript/paper publication. The thesis is comprised of seven chapters described as follows:

- Chapter One is the introduction of the thesis, including the background, the problem statement, the research questions and objectives, and a brief overview of the general methodology.

- Chapter Two answers the first research objective, which is the evidence of nonverbal communication between nurses and hospitalised older adults in clinical settings. It is comprised of one published paper.
- Chapter Three answers the second objective of the study, namely, the nonverbal communication needs of hospitalised older adults. Chapter Three also answers the third objective of how hospitalised older adults interpret nurses' nonverbal communication, from the nurses' and older adults' perspectives. It is comprised of one published paper.
- Chapter Four answers the third objective, with reference to the nonverbal communication strategies used by nurses to communicate nonverbally with hospitalised older adults. It is comprised of one submitted manuscript, which is under revision.
- Chapter Five deals with the attitudes of nursing students towards older adults, and is comprised of three published papers.
- Chapter Six answers the last objective, which is a proposed model for effective nonverbal communication with hospitalised older adults, and is comprised of two published papers.

Table 2 provides a summary of papers/manuscripts aligned with the study objectives.

Table 2: Overview of the thesis

Chapter number	Title of the manuscript	Research objective	Contribution of the paper
2	Evidence of nonverbal communication between nurses and older adults: A scoping review (published)	To establish the evidence of nonverbal communication between nurses and hospitalised older adults in the existing literature.	This paper highlights evidence on nonverbal communication between nurses and cognitively intact older adults in acute and long-term care settings, to give support to the rationale for conducting the study.
3	Older adults' interpretation of nurses' nonverbal communication in Cameroon: A Grounded Theory inquiry (published)	To determine the nonverbal communication needs of hospitalised older adults.	This paper describes the nonverbal communication needs of hospitalised older adults, which can guide nurses' nonverbal communication techniques to achieve effective communication.
		To determine hospitalised older adults' interpretation of nurses' nonverbal communication	This paper describes older adults' interpretations of nurses' nonverbal communication, which can influence the choices of nurses' nonverbal communication techniques to achieve effective communication.
4	Nurses' nonverbal communication strategies with hospitalised older adults (under revision)	To identify the nonverbal communication behaviours and methods used by nurses to	Before directing research towards maximising the usefulness of nonverbal communication techniques, a prior understanding of nurses' current practices is

		communicate with hospitalised older adults.	needed. Therefore, this manuscript aims at describing the strategies used by nurses, and nursing students, to communicate nonverbally with hospitalised older adults.
5	Cameroonian nursing students' attitudes towards older adults (published)	To determine the attitudes of student nurses towards older adults.	This paper explored the attitudes of student nurses towards older adults, which have been proven to influence nurse communication with older adults.
	Mapping evidence of nurses' attitudes towards older adults in Africa: A scoping review protocol (published)		This paper establishes the need to pool evidence on studies related to attitudes towards older adults in African countries to answer the UN's call for more data on older adults from Africa.
	Psychometric properties of the French version of Kogan's Attitudes toward Older People scale: A cross-sectional study conducted on Cameroonian nursing students (published)		This paper establishes if the French version of the tool used to explore nursing students' attitudes towards older adults had good psychometric properties, given the fact that the properties of the French version have never been explored before.
6	Conditions influencing effective nurses' nonverbal communication with hospitalised older adults in Cameroon (published)	To develop a model for effective nonverbal communication between nurses and hospitalised older adults.	This paper describes the factors that influence nurses' nonverbal communication with hospitalised older adults to better address them.

	<p>Model for effective nonverbal communication between nurses and hospitalized older adults in Cameroon: A Grounded Theory study (published)</p>		<p>This paper presents the proposed model for effective nonverbal communication between nurses and hospitalised older adults.</p>
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CHAPTER TWO

EVIDENCE OF NONVERBAL COMMUNICATION BETWEEN NURSES AND OLDER ADULTS: A SCOPING REVIEW

2.1 Introduction

This chapter addresses the first objective of this study and emerged as an antecedent condition in the proposed model. It comprises one published article that serves as a rationale for conducting the study. With the United Nations' call for more data on older adults in African countries (United Nations Population Fund, 2016), and the fact that most data on older adults come from high-income countries (Naidoo and Van Wyk, 2019), this study contributes to the body of knowledge on older adults from an African country. As older adults are more susceptible to declining health and increased dependence (Maresova et al., 2019), coupled with hearing deficits, changes in attention and coding of information, restrictions in interaction and effective verbal communication (Forsgren et al., 2016), they are more likely to rely on nonverbal communication. Therefore, it was necessary to systematically review what has been done regarding nonverbal communication between nurses and hospitalised older adults.

RESEARCH ARTICLE

Open Access

Evidence of nonverbal communication between nurses and older adults: a scoping review



Esther L. Wanko Keutchafo^{*}, Jane Kerr and Mary Ann Jarvis

Abstract

Background: Communication is an integral part of life and of nurse-patient relationships. Effective communication with patients can improve the quality of care. However, the specific communication needs of older adults can render communication between them and nurses as less effective with negative outcomes.

Methods: This scoping review aims at describing the type of nonverbal communication used by nurses to communicate with older adults. It also describes the older adults' perceptions of nurses' nonverbal communication behaviors. It followed (Int J Soc Res 8: 19-32, 2005) framework. Grey literature and 11 databases were systematically searched for studies published in English and French, using search terms synonymous with nonverbal communication between nurses and older adults for the period 2000 to 2019.

Results: The search revealed limited published research addressing nonverbal communication between older adults and nurses. The studies eligible for quality assessment were found to be of high quality. Twenty-two studies were included and highlighted haptics, kinesics, proxemics, and vocalics as most frequently used by nurses when communicating with older adults; while studies showed limited use of artefacts and chronemics. There was no mention of nurses' use of silence as a nonverbal communication strategy. Additionally, there were both older adults' positive and negative responses to nurses' nonverbal communication behaviors.

Conclusion: Nurses should be self-aware of their nonverbal communication behaviors with older adults as well as the way in which the meanings of the messages might be misinterpreted. In addition, nurses should identify their own style of nonverbal communication and understand its modification as necessary in accordance with patient's needs.

Keywords: Nonverbal communication, Nurses, Older adults

Background

Communication is a multi-dimensional, multi-factorial phenomenon and a dynamic, complex process, closely related to the environment in which an individual's experiences are shared [1]. Regardless of age, without communication, people would not be able to make their concerns known or make sense of what is happening to them [2]. Communication links each and every person to their environment [3],

and it is an essential aspect of people's lives [4]. In healthcare settings, communication is essential in establishing nurse-patient relationships which contribute to meaningful engagement with patients, and the fulfilment of their care and social needs [5]. Effective communication is a crucial aspect of nursing care and nurse-patient relationships [6–8]. In healthcare encounters with older adults, communication is important, in particular to understand each person's needs and to support health and well-being [9]. However, older adults may experience hearing deficits, changes in attention and coding of the information [10], and these communicative

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disabilities may restrict their interaction, participation and effective communication [11].

Communication occurs through verbal or nonverbal modalities [12, 13]. Nonverbal communication (NVC) is defined as a variety of communicative behaviors that do not carry linguistic content [14] and are the messages transmitted without using any words [15, 16]. NVC can act as a counter measure or an adjunct to verbal messages, in that it is more reliable if there is inconsistency between verbal and nonverbal messages [17]. Therefore, it is important that there is congruence between nonverbal and verbal messages [18], with research showing that patients are particularly alert to nurses and nurse-aids nonverbal behaviors [17, 19–21], especially when they are anxious and feel uncertain [14]. Despite the value of communication, it has been shown that healthcare workers spent very little time communicating with patients not satisfied with the information they received and how it was communicated [22]. Though verbal communication behaviors of healthcare providers have been extensively studied, their NVC behaviors have received less attention [17].

Scholars have varied in their estimations of the proportion of NVC in communication, with estimates as high as 93% [23], with other estimates of 60 to 90% [24]. Moreover, scholars have described different modalities of NVC, including artefacts (presence of physical and environmental objects), chronemics (use and perception of time), haptics (use of touch), kinesics (form of movement of the body), physical appearance (body type and clothing), proxemics (use of space and distance), vocalics (aspects of the voice), and silences [23, 25–27].

Concern needs to be directed on NVC and its different modalities as critical contributors to high quality care which plays a significant role in demonstrating respect for patients, fostering empathy and trusting provider-patient relationships [24]. A significant relationship exists between patient's perceptions of empathy and eye contact and social touch [28], with touch, and gestures described as communication facilitators [27]. Nurses' positive facial expressions demonstrate signs of bonding, respect and affection towards older patients [29] while voice tones have contributed decisively to the success of interactions with older adults [30]. On the other hand, limited time has been reported by patients to have a negative impact on communication [31, 32], demonstrated in gestures of irritability which have caused embarrassment in older patients [29], and speaking fast has been a further communication barrier between nurses and patients [32]. The present review suggests the importance of understanding NVC between nurses and older adults, and underscores the need for focused research to address the gap in the knowledge of communication in geriatric care. The primary aim of the study

was to identify the type of NVC strategies used by nurses to communicate with older adults in both acute care settings and long-term care settings.

Methods

In order to map evidence-based knowledge and gaps [33–35] related to NVC between nurses and older adults, a systematic scoping review was conducted. Scoping reviews are useful to map the existing literature around a particular topic by charting findings and identifying research gaps [36], especially when the topic is complex or poorly reviewed [37]. A scoping review was chosen over a systematic review because the purpose of the study was to identify knowledge gaps related to nonverbal communication, as opposed to confirming or refuting the basis of current practice against relevant evidence [38]. The study adopted the framework proposed by Arksey and O'Malley [36] and further refined by Levac et al. [39]. The Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist [34] was followed for this review (Additional file 1).

Research questions

The main question for this review was: What is the evidence of NVC between nurses and older adults? The sub questions were: (i) What are the different modalities of NVC used in geriatric nursing care? (ii) What are the functions of using the different NVC modalities? (iii) How do older persons respond to different NVC modalities?

Eligibility criteria

The JBI framework of Population, Concept, Context (PCC) was used to determine the eligibility of the research question for this review (Table 1).

Population

Nurses including nursing students were considered in addition to qualified nurses and nurse aides because they are the largest population of healthcare workers [40].

Concept

The focus was NVC between nurses and older adults (≥ 60 years). For the purpose of this review, the United Nations cut-off of 60 years and older referring to the older adult population in Africa [41] was considered; yet, most Upper Income Countries have accepted the chronological age of 65 years and older, the age of retirement, as a definition of an older adult [42]. Socio-economic and disease reasons suggest that 65 years is not readily applicable to the African context [43].

Older adults with dementia were excluded although they are able to send and receive nonverbal information [39]. Dementia care combines comorbidities, cognitive

Table 1 PCC framework used to determine the eligibility of the research question

Criteria	Inclusion	Exclusion
Population	Professional nurses, registered nurses, enrolled nurses, nurse aides Nursing students	Nurses working in community settings All other healthcare workers Informal geriatric care givers
Concept	Nonverbal communication strategies and interpreted meaning between nurses and older adults (≥60years)	Verbal communication between nurses and older adults Nonverbal communication strategies of older adults Nonverbal communication with nurses and older adults with communication impairments or disorders or dementia.
Context	Acute settings, nursing homes, long-term care	Acute hospital settings End-of-life / Terminal care unit; Psychiatric / mental health care unit; Communities

and functional decline; leading to complex needs and ever-increasing difficulty for the patient in articulation [44], which is viewed as a challenging form of care.

Context

Acute settings and nursing homes were included into the context. In nursing homes, care is usually carried out by nursing staff with different levels of education and training [45]. Furthermore, community settings were excluded from the context because hospitalization is potentially stressful and involves unpleasant experiences for patients and their families [1], and thus offers a greater opportunity to identify the phenomenon under discussion.

Search strategy

The search terms for this review originated from indexed subject headings, keywords of relevant studies, that recurred repetitively, and the Medical Subject Headings (MeSH) terms. The term 'nonverbal communication' was used as a starting point to develop a search string and identified other keywords to refer to NVC. The string/Boolean search terms for this review included: Participants ("nurses" OR "registered nurse" OR "professional nurses" OR "students nurses" OR "nurse aides") AND Concept ("nonverbal communication" OR "kinesics" OR "proxemics" OR "artefacts" OR "chronemics" OR "haptics" OR "vocalics" OR "physical appearance" OR "active listening" OR "silences") AND Context ("old people" OR "elder" OR "elderly" OR "older people" OR "aged" OR "geriatrics").

Database searching

A range of sources were used to ensure a comprehensive coverage of the literature. An initial search was conducted in August 2017, repeated and finalized in November 2019. The search made use of the following databases: Pubmed, Science Direct, Sabinet, Academic search complete, CINAHL with Full Text, Education Source, Health Source- Consumer Edition, Health Source: Nursing/Academic Edition, and MEDLINE.

Google Scholar and Open Grey engines were also used to source relevant literature. Additionally, the reference lists of the included studies were used to search for additional studies. Only studies written in either English or French were retrieved.

Evidence of nurses' NVC strategies while communicating with older adults, conducted in acute settings, and published in English or in French between 2000 and 2019 were included. Quantitative, qualitative, mixed-methods primary research studies, and reviews published in peer-reviewed journals, and grey literature that addressed the research question such as book chapters, thesis and reports were included. Evidence on communication with older adults suffering from communication impairment or dementia, in psychiatric units or communities, published in languages other than English or French were excluded. Evidence published before 2000 were excluded.

Study selection

The titles were reviewed against the eligibility criteria by EW. This initial search was monitored, exported into EndNote X9 reference manager, for abstract and full text screening by EW. The duplicated studies were deleted, followed by independent reviewing of the abstracts by EW and JK. Studies deemed 'unclear' were advanced to the subsequent screening stage. Assistance from the study university library services was requested when full texts could not be retrieved from the databases and five full texts were provided. Full text of 75 eligible studies were independently filtered by EW and JK using Google forms. Additionally, a search of the reference list of all identified reports and studies for additional studies was performed by EW. MAJ pronounced on the discrepancies that occurred during the abstract screening and the full text screening until a consensus was reached.

Data extraction

Information relevant to the aim of this study were extracted independently by EW and JK. A data extraction form was developed electronically using Google forms.

Extracted data included bibliographic details, country and setting, aim/objective, study design, targeted population, nurses' nonverbal strategies used while communicating with older adults, older adults' interpretation of nurses' nonverbal behaviors, and relevant outcomes of interest. Discussions between EK and JK refined the table of information extracted.

Quality appraisal

The Mixed Methods Appraisal Tool (MMAT), version 2018 [46] was independently used by EW and JK to critically appraise the quality of the included primary studies. Discussion was used to resolve discrepancies. The MMAT allowed for assessment of the appropriateness of the aim of the study, adequacy and methodology, study design, participant recruitment, data collection, data analysis, and the presented findings [46]. The quality of studies was graded with a quality score ranging from ≤ 50% as low quality, 51–75% considered as an

average quality, and 76–100% considered as high quality (Table 3).

Collating and summarizing the data

Content thematic analysis approach [64] was employed to extract relevant data that answered the study questions. The results of the included studies were summarized, manually coded, and presented using a narrative approach. The nurses' NVC behaviors were categorized under nine items namely (i) artefacts; (ii) chronemics; (iii) haptics; (iv) kinesics; (v) proxemics; (vi) vocalics; (vii) physical appearance; (viii) active listening; and (ix) silence.

Results

Two hundred and fifty-seven (257) studies met the eligibility criteria following the deletion of 478 duplicates from the 735 studies identified at the title screening stage (Fig. 1).

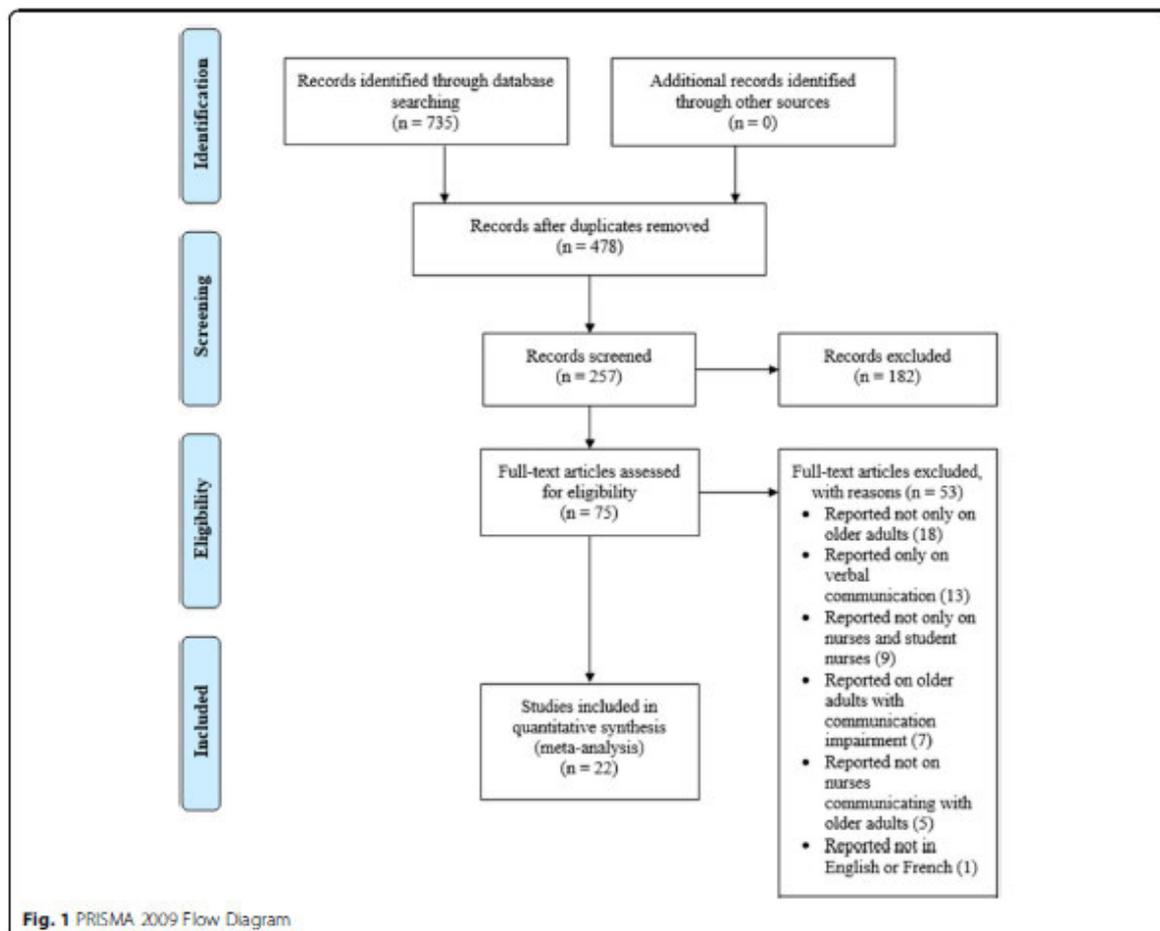


Fig. 1 PRISMA 2009 Flow Diagram

Characteristics of included studies

Tables 2 and 3 summarize the characteristics of the 22 included studies. All included studies were published in English and no eligible French studies were identified.

Study designs

Diverse research methods were employed within the 22 included studies. Thirteen studies were qualitative studies using individual interviews [19, 47, 55, 58, 60, 65], focus groups [51, 65], participant observations including video recordings [30, 47–49, 52, 57, 60], and participant

logs [54]. There were one survey [59], one randomized controlled trial study [62] as well as one mixed methods study [53]. The other studies were a review [50] and two reflections [61, 63]. Three studies were related to continuous professional development [3, 4, 56].

Quality of evidence

Of the 22 included studies, 16 studies underwent methodological quality assessment using the MMAT version 2018 [46]. The remaining six [3, 4, 50, 56, 61, 63] were excluded from the quality appraisal because they were

Table 2 Characteristics of the included studies (1)

Author(s) and year	Country	Setting	Design	Sample sizes	Quality appraisal
Johnsson et al. 2018 [47]	Sweden	Wards in a department of medicine for older people	Qualitative: observations, field conversations, and semi-structured interviews	40 nurses and 40 older adults	100%
Freitas 2016 [30]	Brazil	Family health unit	Qualitative: video recording	32 nurses and 32 older adults	100%
Small et al. 2015 [48]	Canada	Long term care	Qualitative: observation (video recordings)	27 staff and 27 older adults	100%
Freitas 2014 [49]	Brazil	Family health unit	Qualitative: video recording	32 nurses and 32 older adults	100%
Levy-Storms et al. 2011 [51]	USA	Nursing home	Qualitative: focus groups	17 nurse aides and 15 older adults	100%
Medvene and Lann-Wolcott 2010 [19]	USA	Assisted living facility and nursing home	Qualitative: individual interviews	16 nurse aides	100%
Backhaus 2009 [52]	Japan	Nursing home	Qualitative: observations	100 nurses and 57 older adults	100%
Gilbert and Hayes 2009 [53]	USA	Nurse practitioners' offices	Mixed: observations (video recordings), survey	31 nurse practitioners and 155 older adults	100%
Sorensen 2009 [54]	the Balkans	Nursing home and rehabilitation unit	Qualitative: nursing students' logs	10 third-year nursing students	100%
Williams and Warren 2009 [55]	USA	Assisted living facility	Qualitative: interviews and fieldwork	11 nursing assistants and 39 older adults	100%
Carplac-Claver and Levy-Storms 2007 [57]	USA	Nursing homes and assisted living facilities in USA	Qualitative: observations (video recordings)	17 nurse aides and 17 older adults	100%
Kaakinen et al. 2001 [65]	USA	Care facilities, clinics, and private practice	Qualitative: one focus group and in-depth interviews	12 nurse practitioners	100%
Jonas 2006 [58]	Canada	Long term care	Qualitative: semi-structured interviews	19 older adults	100%
Tuohy 2003 [60]	Ireland	Continuing care unit	Qualitative: participant observations and eight semi-structured interviews	8 s year diploma nursing students	100%
Butts 2001 [62]	USA	Two nursing homes	Quantitative: randomized control trial	72 older adults	100%
Park and Song 2005 [59]	Korea	Medical, surgical, and ophthalmology units	Quantitative: survey	136 nurses and 100 older adults	80%
Daly 2017 [4]	Ireland	Not reported	Grey: Continuous Professional Development	N/A	N/A
Williams 2013 [50]	USA	Literature	Review	N/A	N/A
Calcagno 2008 [56]	USA	Long-term care	Grey: Continuous Professional Development	N/A	N/A
Linda 2002 [3]	UK	Not reported	Grey: Continuous Professional Development	N/A	N/A
Bush 2001 [61]	Germany	Not reported	Grey: author's reflection	N/A	N/A
Babikian 2000 [63]	USA	Long term care	Grey: authors' reflection	N/A	N/A

Table 3 Characteristics of the included studies (2)

Author(s) and year	Objective	Outcomes reported	Conclusions
2018 Johnson et al. 2018 [47]	To describe how nurses communicate with older patients and their relatives in a department of medicine for older people in western Sweden	Nurses' nonverbal communication strategies: standing position, eye gaze, speaking faster, speaking louder, speaking with a friendly tone, kneeling down, closing the door, smiling, facial expressions, smiling	Proxemics, kinesics, vocalics
2017 Daly 2017 [4]	To explore communication between nurses and older adults, with an emphasis on promoting effective communication in practice	Nurses' nonverbal communication strategies: considering the environment, using touch appropriately, positioning oneself at the same level, active and compassionate listening	Artefacts, haptics, proxemics, active listening
2016 Freitas 2016 [30]	To assess proxemics communication between nurse and elderly in nursing consultation	Nurses' nonverbal communication strategies: posture-Sex, sociofugo-sociopeto axis, distance evaluation, kinaesthetic, contact behaviour, visual code, thermal code, olfactory code, voice Volume	kinesics, vocalics, haptics, proxemics, artefacts
2015 Small et al. 2015 [48]	To explore the nature of communication between care staff and residents when they do not share the same language and ethno cultural backgrounds	Nurses' nonverbal communication strategies: pointing, touching, eye gazing, smiling, sitting next, head nodding, playful gestures	kinesics, proxemics, haptics
2014 Freitas 2014 [49]	To analyse the performance of nurses in nursing consultation for the elderly based on the theoretical framework of Hall	Nurses' nonverbal communication strategies: posture-sex, sociofugo-Sociopeto axis, distance evaluation, kinaesthetic, contact behaviour, visual code, thermal code, olfactory code, voice Volume	kinesics, vocalics, haptics, proxemics
2013 Williams 2013 [50]	To review evidence-based strategies for effective communication with older adults across long-term care settings	Nurses' nonverbal communication strategies: eye contact, facial expressions, singing, humming, touching. Patients' responses of nurses' nonverbal communication strategies: dominance, disinterest	kinesics, haptics, negative responses
2011 Levy-Storms et al. 2011 [51]	To characterise the meaning of and experiences with individualized care from the perspectives of both nursing aides and nursing-home residents	Nurses' nonverbal communication strategies: listening, touching the shoulder. Patients' responses of nurses' nonverbal communication strategies: respect, favouritism	haptics, active listening, Mixed responses
2010 Medvene and Lann-Wolcott 2010 [19]	To identify the communication behaviours and strategies used by socially skilled geriatric nurse aides working with residents in long term care facilities	Nurses' nonverbal communication strategies: touching, smiling, spending time with, observing body posture;	haptics, kinesics, chronemics
2009 Backhaus 2009 [52]	To examine the special nature of communication between residents and staff in a Japanese elderly care institution by taking a cross-cultural perspective	Nurses' nonverbal communication strategies: kiss, hand shake, military tone	haptics, vocalics
2009 Gilbert and Hayes 2009 [53]	To examine contributions of older patients' and nurse practitioners' characteristics and the content and relationship components of their communication to patients' proximal outcomes and longer-term outcomes, and contributions of proximal outcomes to longer-term outcomes	Nurses' nonverbal communication strategies: gaze, nod or shake of the head, eyebrow movement, smile, touch	kinesics, haptics
2009 Sorensen 2009 [54]	To demonstrate and discuss how personal competence, with emphasis on communication and empathy, can be developed by nursing students through international clinical practice	Nurses' nonverbal communication strategies: body contact, pointing, nodding, smiling, laughing, active listening, voice pitch, thumbs up,	kinesics, vocalics, active listening, haptics
2009 Williams and Warren 2009 [55]	To explore how communication affects issues relating to residents maintaining cognitive and physical functioning so that they are able to remain in residence	Nurses' nonverbal communication strategies: talk louder. Patients' responses of nurses' nonverbal communication strategies: rudeness; disinterest in; disdain for; perceived hypocrisy; threats to noncompliance; infantilization of residents; adultification of residents;	Vocalics, Negative responses
2008 Calcagno 2008 [56]	To provide pointers to help clinicians listen to the needs and concerns of their clients	Nurses' nonverbal communication strategies: greeting with a smile and handshake, sitting face-to-face, leaning forward, sitting close enough, listening, having an open posture	active listening, kinesics, proxemics
2007 Carpiac-	To identify types and examples of nurse aide-	Nurses' nonverbal communication strategies:	kinesics, haptics,

Table 3 Characteristics of the included studies (2) (Continued)

Author(s) and year	Objective	Outcomes reported	Conclusions
Claver and Levy-Storms 2007 [57]	initiated communication with long-term care residents during mealtime assistance in the context of residents' responses	smiling, touching, laughing, singing, eye gazing, leaning forward, nodding, shaking hands, high pitch, soft tone	vocalics
2001 Kaakinen et al. 2001 [65]	To describe communication between nurse practitioners and elderly clients	Nurses' nonverbal communication strategies: touch, time, flyers, listening, drawings, pamphlets, written instructions; books; education files	artefacts, chronemics, haptics, active listening
2006 Jonas 2006 [58]	To explore the experience of being listened to for older adults living in long-term care facilities	Patients' responses of nurses' nonverbal communication strategies: nurturing contentment, vital genuine connections, respect and benefit	Active listening Positive responses
2005 Park and Song 2005 [59]	To determine and compare the communication barriers perceived by older inpatients and nurses caring for them, with the aim of identifying the disparities between the perceptions of the two parties	Nurses' nonverbal communication strategies: speaking far away, without eye contact, with mask on, too loudly, too fast. Patients' responses of nurses' nonverbal communication strategies: working without a sincere attitude, being unfriendly, showing no respect	proxemics, kinesics, artefacts, vocalics negative responses
2003 Tuohy 2003 [60]	To ascertain how student nurses communicate with older people	Nurses' nonverbal communication strategies: talking louder and slower, eye contact, facial expressions, appropriate touch	vocalics, kinesics, haptics
2002 Linda 2002 [3]	To explore the skills that are required for effective communication with older people	Nurses' nonverbal communication strategies: body movements, postures, gestures, touch, proximity, pace of approach, eye contact, demeaning tone, speaking too quickly	kinesics, vocalics, haptics, proxemics
2001 Bush 2001 [61]	Author's reflection on active listening	Nurses' nonverbal communication strategies: leaning over, holding hand, active listening, eye contact, spending more time, notes, learning tools, posture, physical proximity	haptics, kinesics, active listening, chronemic, artefacts, proxemics
2001 Butts 2001 [62]	To examine whether comfort touch improved the perceptions of self-esteem, well-being and social processes, health status, life satisfaction and self-actualization, and faith or belief and self-responsibility	Patients' responses to nurses' nonverbal communication strategies: improved perception of self-esteem, well-being, social processes, health status, life satisfaction, self-actualisation, and faith or belief	Haptics Positive responses
2000 Babikian 2000 [63]	Author's reflection on her encounter with an old person	Nurses' nonverbal communication strategies: holding of hand, sitting next to	proxemics, haptics

not primary studies. The 16 studies which underwent methodological quality assessment showed high methodological quality and scored between 80 and 100%. Of these studies, 15 studies [19, 30, 47–49, 51–55, 57, 58, 60, 62, 65] scored 100%, and one [59] scored 80%.

Study results

Three outcomes were reported in the studies: the NVC behaviors of nurses, the functions of those behaviors and the responses of older adults to the NVC behaviors.

Nurses' NVC behaviors and their functions

Of the 22 included studies, 20 reported on nurses' NVC behaviors including haptics, kinesics, proxemics, vocalics, active listening, artefacts, and chronemics. There was no mention of physical appearance nor silences in all the included studies.

Haptics

Haptics were reported in 17 studies [3, 4, 19, 30, 48–54, 57, 60–63, 65] of which 12 studies, which underwent

quality appraisal, were of high quality. Haptics were identified when nurses shook hands with older adults, held their hands, stroked or touched their hands. Nurses also kissed older adults, hugged them or gave them a pat on the shoulder.

In a study aiming at examining the special nature of communication between residents and staff in a Japanese elderly care institution, haptics were referred to as a handshake given by a member of staff against one older adult will [52]. This type of touch was used in a joking manner in Japan, where handshakes are uncommon, but was imposed on the older adult who did not appreciate it [52]. In another study conducted on types and examples of nurse aides-initiated communication with long-term care residents during mealtime assistance, haptics referred to a handshake when staff praised the older adults for eating all their food or to a touch on the arm for raising attention [57]. Stroking older adults' hands were reported to be a means of conveying attention or affection while holding one older adult's head back was used by a nurse to appease a negative response from the

older adult in a study exploring the nature of communication between care staff and residents who did not share the same languages and ethno-cultural backgrounds [48].

Hugs were mentioned as a deliberate communication strategy used by a nurse practitioner to meet the unique needs of older adults in a study aimed at describing communication between nurse practitioners and older adults [65]. Hugs were also reported by nurses as a conscious NVC strategy specific to each older adult to establish rapport and prevent communication breakdowns between nurses and older adults [48]. An example was demonstrated through staff rubbing the sleepy older adult under the chin as a form of stimulus [48]. Additionally, a pat on the shoulder was mentioned as a caring gesture in a study aimed at characterizing the meaning of and experiences with individualized care from the perspectives of both nursing aides and nursing home residents [51]. However, a kiss on an older adult male's forehead was described as inappropriate conduct [52].

Kinesics

Kinesics was reported in 14 studies [19, 30, 48–50, 53, 54, 56, 57, 59–61] of which 8 studies, which underwent quality appraisal, were of high quality. Nursing students developing personal competence in international clinical practice, used pointing and thumbs up, as movements of the hands, to communicate nonverbally when words were in short supply [54]. Further, a Swedish study described nurses' use of pointing to communicate with older adults and their relatives in a department of medicine for older adults [47].

Kinesics also referred to as movements of the head, included facial expressions, movements of the eyes, and head nods. Student nurses' use of facial expressions and eye contact were described as components of effective communication with older adults [60]. While facial expressions such as a smile and laughter were reported to both quickly and amicably resolve disagreements between staff and older adults, smiles were seen as enhancers of the communication in a study where staff occasionally engaged in smiling with older adults [48]. A nurses' smile was also seen as a way to either convey the message [54], to initiate communication [57] or an attempt to create a positive atmosphere during the meeting with older adults [47].

Student nurses described head nodding as a means to convey their message nonverbally when communicating with older adults [54]. Nodding was also used to convey communicative intent nonverbally, to indicate acceptance or rejection of staff's actions [48], and to address or to praise the older adult [57]. Additionally, nodding was used by nurses to show that they had understood what older adults and their relatives had said [47].

Eye gaze was seen as nurses' willingness to be engaged in conversation in a review on evidence-based strategies for effective communication with older adults across long-term care settings [50]. Eye gaze was also used to gain older adults' attention, or as means to both connect relationally and instrumentally [48]. Additionally, eye gazing was used to gain older adults' attention, when the nature of communication between care staff and residents using different languages and having ethno-cultural backgrounds was explored [48]. Eye contact was suggested as advice to effectively communicate with older adults [3], or a means of improving communication skills [61]. However, Visual Code factor was among the factors that received the lowest scores in a study analyzing the performance of nurses in nursing consultation for the older adults based on the theoretical framework of Hall [49]. The low score was justified by the unpreparedness of nurses about the aging process [49].

Movements of the body included leaning over older adults to assess their progress [61] or to check on them in a study conducted on types and examples of nurse aide-initiated communication with long-term care residents during mealtime assistance [57]. Additionally, leaning forward was a means to indicate the nurses' eagerness and readiness to listen to the older adults' stories, in a study providing pointers to help clinicians listen to the needs and concerns of older adults [56].

Proxemics

Proxemics, defined as the social meaning of space and interactive field, which determines how relationships occur [115] were reported in 10 studies [3, 4, 30, 47, 49, 56, 59, 61, 63], and included physical proximity and physical distance. Of these studies, eight were of high quality based on the MMAT assessment.

Speaking far away was mentioned as a nurse-related communication barrier perceived by both older adults and nurses [59]. Additionally, a Swedish study noted that nurses remained standing while using a medical voice to communicate with older adults, [47]. In contrast, nurses positioning themselves at the same level as older adults was a strategy to support their communication with older adults [4]. Sitting next to older adults was part of the playful gestures nurses engaged in, in a study which explored the nature of communication between care staff and residents with different languages and ethno-cultural backgrounds [48]. Likewise, pointers to help clinicians listen to the needs and concerns of older persons included physical presence to enhance the ability to listen and show interest [46], sitting by the older adult's side to hold their hand [63], sitting face to face to indicate presence and the readiness to listen [56]. On the contrary to the literature supporting engagement on the same plane, kneeling down was also used by nurses to

make eye contact with older adults and seen in the instance of planning a good home return [47].

Vocalics

Vocalics were reported in nine studies [30, 47, 49, 52, 54, 55, 57, 59, 60] where they described different aspects of the voice tone and sense of calm. All the eight studies that underwent quality appraisal were of high quality.

A military tone with endearment used to address an older adult, in a Japanese elderly care institution, was not appreciated even though used in jest [52]. Conversely, although to no avail, a soft tone was used by a nurse to encourage an older adult to eat her food [57]. Additionally, speaking too quickly and in a demeaning tone were reported as barriers to effective communication [3]. Likewise, speaking too loudly and speaking too fast were nurse-related communication barriers as perceived by nurses and older adults [59]. Speaking faster and with a monotonous tone were reported when nurses used a medical voice to communicate with older adults as well as speaking louder and with great emphasis on selected words were reported when nurses used a power voice [47].

Conversely, speaking calmly contributed to create mutual trust in the student nurse-older adult relationships in a study demonstrating that communication and empathy can be developed by student nurses through clinical practice [54]. Speaking slower was a means for student nurses to be understood by older adults [60], and speaking with a friendly tone was used by nurses to increase the knowledge of older adults [47]. Additionally, the tone used by nurses favored communication with older adults and made possible the understanding of what was being expressed in a study aimed at assessing proxemics communication between nurse and elderly in nursing consultation [30].

Listening

Listening was reported in seven studies [4, 51, 54, 56, 58, 61, 65] of which four studies were eligible for quality appraisal and scored 100% on the MMAT assessment.

In one instance, listening was reported as a means to help nurses assess older adults' physical condition more effectively [61]. Active listening coupled with compassionate listening was a strategy to support nurses' communication with older adults [4], and proven to be helpful [65]. Emphatic, non-judgmental listening, while being aware of the body language of the older adults, provided pointers to help nurses listen to the needs and concerns of their clients [56].

Actively listening to older adults' verbal and NVC behaviors was seen as leading to individualized care and a sign of respect to older adults in a study characterizing the meaning of and experiences with individualized care from the perspectives of both nursing aides and nursing-

home residents [51]. Nursing students, associated active listening in relation to NVC as an empathic response and an open - minded attitude [54].

Artefacts

Artefacts were reported in five of the 22 included studies [4, 30, 59, 61, 65] of which three studies eligible for quality appraisal were of high quality.

Artefacts were communication supports and aids that can support nurses' communication with older adults [4]. Artefacts included notes and hands-on learning tools as strategies to improve communication [61] as well as flyers, pamphlets, written instructions, books and education files [65].

When promoting effective communication in practice, it was advised that nurses should be mindful of the physical environment that can affect interactions between them and older adults [4]. The results show that nurses closed the door of an older adult's room to avoid any disturbance of the communication exchange in Sweden [47], while nurses performed their service with the door opened and allowed excessive entry of others into the room while consulting older adults in Brazil [30]. Nurses should guarantee privacy and should avoid speaking while wearing a mask as it is considered as an impediment to effective communication [59].

Chronemics

There was lesser reporting of chronemics and NVC, described in only three studies [19, 61, 65] and only one study eligible for quality assessment was of good quality [19].

In a study aimed at identifying the communication behaviors and strategies used by socially skilled geriatric nurse aides working with residents in long term care facilities, spending time with older adults was described by the nurses as giving them positive regard, explained as being respectful, acknowledging and showing interest and approval [19]. In a reflection on active listening, spending more time with older patients was mentioned as a means to promote feelings of acceptance, and exercising patience as the most challenging part of the communication process [61]. Likewise, time was found to positively affect nurse practitioners-older adults relationships [65].

Old adults' responses to nurses' NVC behaviors

Six studies [50, 51, 55, 58, 59, 62] reported on the older adults' responses to nurses' NVC behaviors. The responses were either positive or negative.

Positive responses

Positive responses to nurses' NVC behaviors were reported in three studies [51, 58, 62]. Comfort touch from

nurses was shown to improve the perceptions of self-esteem, well-being, social processes, health status, life satisfaction, self-actualization, and faith or belief [62] while a pat on the shoulder was perceived as a sign of respect [51]. In a study exploring the experience of being listened to, for older adults living in long-term care facilities, results showed they expressed their satisfaction, gratification, and unburdening and described their relationships with the nurses who listened to them as being close like friends or family [58].

Negative responses

Negative responses to nurses' NVC behaviors were reported in four studies [50, 51, 55, 59]. In a study aimed at exploring how communication affects issues relating to residents maintaining cognitive and physical functioning in order to remain in the residence, vocalics were perceived by the nurses as rudeness, disinterest, "infantilisation" and "adultification" [55]. In a study with the aim to determine and compare the communication barriers perceived by older adults and nurses caring for them, speaking far away, without eye contact, wearing a mask and too loud was perceived as being unfriendly, working without a sincere attitude, and showing no respect [59]. In a review of evidence-based strategies for effective communication with older adults across long-term care settings, touching their buttocks or looming over them were perceived by older adults as dominance, while glancing at their watch or down the hall was perceived as a sign of disinterest [50].

Discussion

This systematic scoping review explored evidence on NVC between nurses and older adults, focusing on cognitively intact older adults with no mental illness nor communication impairment. A total of 22 studies were included. Haptics, kinesics, proxemics, and vocalics were the most frequently used NVC strategies by nurses when communicating with older adults, of which 15 scored 100% on MATT. This study's findings further demonstrate a limited use of artefacts and chronemics as forms of NVC. Physical appearance regarding NVC was not mentioned in any of the included studies nor was silence. The results evidenced limited published research in the select topic and in particular for studies located in Asia and Africa, as well as for quantitative studies. Though the majority of studies were qualitative designs, which do not allow generalization of findings, the quality of the included studies ensures credibility.

The majority of the studies included in this review illustrate the different modalities of nurses' NVC behaviors in geriatric nursing care. The most cited NVC behaviors were haptics perhaps because touch is an essential and often unavoidable part of nursing care [66]. Haptics or

communication by touch [67] can include aggressive touch, accidental touch, playful touch, task related touch [68] or task-oriented touch, touch promoting physical comfort, and touch providing emotional containment [66, 68]. In the included studies, touch was used to joke, to praise, to get attention, to convey attention, to stimulate, and to show care. In one instance, touch was not appreciated by the older adult [52], which highlights that touch can lead to either positive or negative outcomes, depending on the nurses' awareness and intention [69]. Touch can be a nursing tool [70], but nurses need to use touch appropriately, taking into consideration preferences and avoiding its imposition on older adults.

Kinesics are different from haptics in the sense that there is no contact with a person, and only movements of the hands, head, and the body are used. Kinesics were used when words were in short supply, to convey messages, to indicate acceptance or rejection by either party, to resolve disagreements amicably and with speed, to initiate communication, to get attention, and lastly to praise. Gesturing with a meaning of rejection or disapproval as well as abrupt gestures interrupt the exchange of messages [71], highlighting the need for nurses to ensure correct decoding of kinesics [71]. Also, it is important that nurses keep eye contact with older adults during interactions, keeping in mind that the permission of this contact may vary depending on culture [30].

Proxemics included personal space and territoriality [72] and included sitting next to, face-to-face, beside the person, kneeling, looming over, and speaking far away from the person. Proximity can therefore indicate presence, readiness to listen, and a sign of interest in the older adult. Distance can be seen as a barrier to effective communication with older adults. There should be a balance between distance and proximity, with nurses mindful of the often-invasive nature of nursing, and the need to create a therapeutic space where older adults' privacy is not violated.

Vocalics are often associated with "elderspeak", which in addition includes oversimplifying the language, speaking at a slow rate, loud, and with a demeaning tone [73]. In this study, vocalics included speaking with a military or a demeaning tone, speaking too fast or too loud, which led to negative outcomes while speaking calmly or slower led to positive outcomes. Conversely, speaking with a soft tone also led to a negative outcome [57]. In light of the importance of nurses developing self-awareness of the tone that they use to communicate, an opportunity exists for them to use audio recordings to reflect on their tone [3].

Physical appearance was not mentioned in any of the included studies; yet, the clothing worn in nursing is a form of NVC that frequently shapes people's judgments about others, regardless of whether or not the

perceptions are true [74]. Therefore, nurses should be aware that the way they present themselves through their uniforms might indirectly communicate something about the care they render.

Positive responses to nurses' NVC behaviors included improved perceptions of self-esteem, well-being, health status, and faith as well as expressed satisfaction and gratification when being listened to by nurses. On the other hand, older adults viewed vocalics used by nurses as a sign of rudeness and disinterest, while nurses who used proxemics were perceived as being unfriendly, working without a sincere attitude, and showing no respect. In order to avoid negative responses from older adults, a level of trust between nurses and older adults needs to precede touch [75]. Though nurses–patients' communication is influenced by conditions that arise in hospital settings, [76], nurses need to adjust their communication style to each situation and each patient [77].

Implications for practice

Awareness of NVC will lead to a greater understanding of the messages exchanged [74]. When the essence of nursing care falls short, all other initiatives are more likely to fail as well [78], implying that if communication with older adults is hindered or tampered with, everything else nurses engage in is likely to fail. Nurses need to be self-aware of their NVC as well as the way in which the meanings of the messages might be misinterpreted, highlighting a need for interventions to aid nurses to interact and communicate holistically with older adults [79]. Additionally, when nurses are aware that older adults are not a homogenous group subject to general assumptions of care [4], communication barriers created by nurses create barriers [61] would be avoided.

Implications for education

An emphasis should be placed on teaching effective communication to prepare future healthcare providers to minimize miscommunication, deliver safe, quality care, and contribute to anti-ageism measures. Also, the training of nurse on NVC will enable the establishment of bonds with older adults and culminate in effective care [49]. Preparation of the neophytes will ensure a sustainable, older-person centered and appropriately trained workforce as advocated by the WHO (2016) [43].

Implications for research

This scoping review draws attention to the limited evidence, specific to NVC between nurses and older adults without mental illness, or communication impairment, indicating a gap in literature, in particular in Asian and African countries. In addition, this review highlights the need for further research to provide an African insight into NVC to answer the WHO call for more data to

understand the needs and the status of older adults in Africa [80]. We further recommend a study to determine the impact of nurses' NVC behaviors on older adults' satisfaction and safety of care. Though time constraints can sometimes prevent nurses from providing the attentive communication older adults seek, it is important that nurses identify their own style of NVC and understand how to modify, when necessary, their interactions with patients, in particular older persons.

Strengths and limitations

Strengths

This study is possibly the first scoping review to map evidence on NVC between nurses and older adults with neither mental illness nor communication impairment. This study demonstrated a substantial gap in the NVC literature to guide future research on older adults with no mental illness or communication impairment. The study's methodology also allowed the inclusion of different study designs, and the identification of relevant studies methodically charting, and analyzing the outcomes.

Limitations

Despite the inclusion of MeSH terms, it is possible that research on NVC existed under different terminologies, which were not captured in this review. As only abstracts written in English and French were included, some relevant studies may have been missed. Several studies of NVC between nurses and older adults may have been reported only in contexts of mental illnesses or communication deficiencies, leading to their exclusion from this review. Additionally, studies on NVC between other healthcare workers and older adults have not been reviewed.

Conclusions

This study explored evidence on NVC between nurses and older adults with no mental illness nor communication impairment. The results revealed that haptics, kinesics, proxemics, and vocalics were the most frequently used NVC strategies by nurses while there was a limited use of artefacts and chronemics as forms of NVC. Furthermore, physical appearance and silence were not mentioned in any of the 22 included studies. Nurses used NVC strategies to joke, to praise, to get or convey attention, to stimulate, to show care, to indicate acceptance or rejection, to resolve disagreements amicably, to initiate communication, to indicate presence, readiness to listen, and a sign of interest in the older adults. Lastly, older adults responded to nurses' NVC behaviors either in a positive way or in a negative way.

Supplementary information

Supplementary information accompanies this paper at <https://doi.org/10.1186/s12912-020-00443-9>.

Additional file 1.

Additional file 2.

Abbreviations

MMAT: Mixed Methods Appraisal Tool; MeSH: Medical Subject Headings; NVC: Nonverbal Communication; PCC: Population, Concept, Context; PRISMA-ScR: Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews; WHO: World Health organization

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Authors' contributions

EW conceptualized the study under the supervision of JK, and designed the methodology. EW, JK, and MAJ contributed to writing the manuscript. MAJ critically reviewed the manuscript. All authors read and approved the manuscript.

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2.2 Conclusion

This paper showed limited evidence of nonverbal communication between nurses and cognitively intact older adults in acute settings in African countries, thus justifying the rationale for this study. In Cameroon, there are no long-term care settings in contrast to South Africa, Seychelles, and Mauritius (World Health Organization, 2017). This implies that older adults go to hospital settings to seek medical attention where they must communicate with nurses. Yet, Cameroon is one of the most linguistically fragmented countries in sub-Saharan Africa, with approximately 250 indigenous languages, apart from English and French, which are both considered official languages (Chiatoh, 2014). As a result, it is less likely that a nurse speaks the same vernacular as an older patient who does not speak French or English. This means that nurses and older adults resort to nonverbal communication. Therefore, it was vital to understand the hospitalised older adults' interpretations and needs of nonverbal communication described in the next chapter.

CHAPTER THREE: OLDER ADULTS' NEEDS AND INTERPRETATION OF NURSES' NONVERBAL COMMUNICATION

3.1 Introduction

This chapter addresses the second and third objectives of the study and emerged as two of the intervening conditions in the proposed model. It comprises one published paper that captures how hospitalised older adults interpret nurses' nonverbal communication. It is worth noting that people rely on verbal or nonverbal behaviour to interpret a message communicated to them, based on distinct situational factors (Mast, 2007). This is called the decoding process (Hall et al., 2019). Additionally, people rapidly make judgments of others (Carney et al., 2007) or their gestures, based on a brief excerpt of expressive behaviours sampled from any channel of communication (Ambady et al., 2000). This means that a receiver interprets a sender's cues or the absence thereof (Hall et al., 2019). Older adults can make rapid judgments about nurses based on a brief excerpt of nurses' expressive nonverbal behaviour or the absence thereof, meaning that older adults can interpret or misinterpret nurses' nonverbal behaviours (Alshammari et al., 2019). Because there is a risk of miscommunication or misunderstanding that cannot be eliminated when using nonverbal communication (Ali and Watson, 2017), it was crucial to understand older adults' interpretation and needs of nonverbal communication in hospital settings, because negative experiences of interactions with nurses shape subsequent communication (Chan et al., 2018), which can impede the quality of care provided.

Older Adults' Interpretation of Nurses' Nonverbal Communication in Cameroon: A Grounded Theory Inquiry

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Abstract

Communication is central to nursing care. Yet, the nonverbal aspect of communication tends to be neglected or underestimated in nursing studies. Research has shown that older patients interpret nurses' communication messages during the clinical encounter. This article conceptualizes older adults' interpretation of and need for nonverbal communication (NVC) to enhance patient-centered communication advocated by the World Health Organization. The Corbin and Strauss (2015) inductive Grounded Theory approach was used to collect data from 3 hospital units in Cameroon using in-depth interviews with eight older adults, thirteen nurses, and four student nurses between July 2018 and January 2020. Open coding, axial coding, and selective coding were used for analysis, which reveals that interpretations of NVC can be positive or negative. It means that older adults view nurses either as angels or as difficult persons, depending on the nurses' positive or negative NVC and behaviors. These interpretations lead to consequences ranging from a preference for some nurses to noncompliance with care. The results further show that older adults need active listening, humor, and affection from nurses. Information regarding older adults' interpretation of and need for NVC can be used to improve curriculum content and to develop skills in and awareness of NVC with older adults. It is recommended that further research expand on effective nonverbal techniques during COVID-19 times where the meaning of facial expressions and voice inflection can be disrupted.

Keywords

older adults, grounded theory, communication, Cameroon, nonverbal communication, and nursing

Questions and answers

Question 1: What do we already know about this topic?

Answer 1: Nonverbal communication is part of patient-centered care but it is under researched in nursing studies.

Question 2: How does your research contribute to the field?

Answer 2: The results show that older adults can interpret nurses' nonverbal communication positively or negatively, with consequences attached to their interpretations.

Question 3: What are your research's implications towards theory, practice, or policy?

Answer 3: The findings challenge nurses to look for ways to get messages across to older adults, considering their interpretation of and their needs for NVC. While there are possibilities of misinterpretations of NVC, our study suggests that older adults' interpretation of NVC guides better ways of communication with older adults. In times of COVID-19 where preventive measures such as social distancing and constant wearing of masks are emphasized, new norms regarding NVC should be explored.

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Introduction

Worldwide, the aging population is growing, and people aged 60 years and older numbered 1 billion in the world, and 32 million in Africa in 2019.¹ This rapid population growth requires prioritization of patient-centered care (PCC), which is a challenge in delivering quality care to older adults² because of the complex healthcare needs and the communicative and cognitive impairments of older adults.³ Patient-centered care assumes that healthcare workers should communicate and interact with patients in a person-centered way.⁴ Person-centered communication (PCCom) is a set of skills demonstrated through verbal communication (VC) and nonverbal communication (NVC). It aims to ensure that healthcare workers attend to patients⁵ and their different needs and expectations.⁶ To be more person-centered, healthcare workers should promote PCCom with older adults.⁷

Communication is more complicated than the mere transmission of information,⁸ and it includes verbal and nonverbal components.⁹ Yet, the nonverbal aspect of communication seems to be underestimated or neglected in nursing studies.¹⁰ Nonverbal communication is defined as “behavior of the face, body, or voice minus the linguistic content; everything but the words.”¹¹ NVC remains a significant part of communication, and it has different modalities, including haptics (the use of touch), artifacts (the presence of physical and environmental objects), proxemics (the use of space and distance), chronemics (the use and perception of time), kinesics (forms of movement of the body), physical appearance (body type and clothing), silences, and vocalics (aspects of the voice).^{12,13} Researchers use the terms “nonverbal communications (NVC)” and “nonverbal behaviors (NVBs)” interchangeably.¹¹ We have done the same in this study.

Research has shown that people, including older adults, rely on verbal behavior (VB) or NVB to interpret a message communicated to them, based on distinct situational factors.¹⁴ This is called the decoding process.¹¹ Research also suggests that people rapidly make judgments of others¹⁵ or their gestures, based on a brief excerpt of expressive behaviors sampled from any channel of communication.¹⁶ This means that a receiver interprets a sender’s cues or the absence thereof.¹¹ Older adults can make rapid judgments on nurses based on a brief excerpt of nurses’ expressive NVB or the absence thereof. Although older adults may experience changes in the coding of information,¹⁷ they can interpret or misinterpret nurses’ NVBs.^{18,19}

Focus needs to be directed toward NVC in hospital settings because with the rapid growth of the older population, nurses are expected to care for older adults more than any other patient.²⁰ This implies that older adults are more likely to interpret nurses’ NVB more often than any other patient is. Additionally, studies conducted in Africa on communication between nurses and patients from 2000 to 2019 mostly focused on maternal and reproductive care, HIV, operative/postoperative care, intensive and palliative care, and primary

healthcare settings.²¹ In a context where more data to understand the needs and the status of older adults in Africa are needed,²² it is crucial to understand how older adults from an African country interpret nurses’ NVC as well as their needs for NVC in hospital settings because older adults respond positively or negatively to nurses’ NVC.¹⁸ Additionally, negative experiences of interactions with nurses shape subsequent communication,²³ which can impede the quality of care provided. Therefore, this paper aims at describing older adults’ interpretation of nurses’ NVC.

Methods

This study is part of a larger grounded theory study on NVC between nurses and hospitalized older adults.

Study Design

The chosen design was a grounded theory, which is an inductive systematic inquiry into empirical data and observations to explain a poorly understood phenomenon,²⁴ such as NVC between nurses and hospitalized older adults. The study was underpinned by Symbolic Interactionism, which holds that human beings and shared meanings of reality are defined through interactions between and among the researcher and the participants.²⁵

Settings

The study was conducted in three wards in two public hospitals in the East Region and the Central Region of Cameroon. Data were collected in 2 medical units and 1 geriatric unit. Cameroon has a pyramidal public healthcare sector, with a centralized system of administration (a health ministry), an intermediate level (regional delegations), and a peripheral level (health districts).²⁶ There is only 1 geriatric unit in Cameroon and no long-term care facilities. It is the reason why most of the older adults who need healthcare services are admitted in wards with younger adults and are categorized according to their illness.

Participants

Purposive sampling and then theoretical sampling were used to ensure selection of participants with rich data, which is required to understand the phenomenon of interest.²⁴ Staff and student nurses were purposively selected due to their contact with older adults. The researcher started by purposefully sampling staff nurses with 2 years of experience, assuming that they will have enough significant interactions with older patients. After the first analyses, theoretical sampling was achieved when a nurse referred the researcher to other nurses that had previously worked in the chosen units, and when student nurses were also selected. Student nurses were included because older adults are cared for by

both staff and student nurses.⁸ Criteria for including nursing students were experience in caring for an older adult during clinical placement and willingness to participate in the study. Four student nurses and thirteen nurses were interviewed.

Additionally, 47 patients were referred to the study. Thirteen patients were excluded from the study due to their being unable to speak and understand English or French, or because they had a critical illness. The researcher contacted suitable patients and their relatives to present the study and obtain their consent. Of those who met the inclusion criteria ($n = 34$), 2 patients declined to participate, 1 died, and 2 were discharged against medical advice. Eight older adults that gave their consent were interviewed.

Data Collection

Data were collected between July 2018 and January 2020 and consisted of 25 in-depth interviews conducted with older adults, students, and staff nurses until saturation was reached. The interview guides consisted of open-ended questions derived from observations of interactions between nurses, student nurses and older patients.

Ethical Considerations

Ethical clearance was obtained from the university ethics committee, and permission to conduct the study was given by the 2 hospitals. Participants were provided with information related to the purpose of the study, confidentiality, anonymity, and their right to withdraw from the study at any time without penalty. Participants signed consent forms and authorization for audio recording. Pseudonyms were used to ensure anonymity.

Data Analysis

The French interviews were translated into English by a certified translator, and a back translation was done to allow for peer review. The interviews were transcribed verbatim. Transcripts were checked against the audio recordings for accuracy. Data analysis started with the researcher reading each transcript to familiarize herself with the content. As suggested by Corbin and Strauss,²⁴ questioning, making constant comparisons of incidents and categories, and thinking about the various meanings of a word were used throughout the analysis until data saturation was reached. The use of personal experiences was avoided to reduce bias and prevent the imposition of personal experiences on data. NVivo version 12 qualitative data analysis software facilitated the analysis. Open coding, where lower-level concepts were constructed, resulted in codes expressed in words similar to those used by the participants. Axial coding enabled collapsing the codes addressing similar phenomena into categories through constant comparison. Selective coding enabled relationship verification between categories.

Findings

All the participants reported on older adults' interpretation of NVC and their need for NVC as described in Table 1. Five categories emerged from the data with regards to older adults' interpretations of nurses' NVC: (a) the core category, (b) the contextual conditions, (c) the actions/interactions, (d) the intervening conditions, and (e) the outcomes.

Core Category

The core category, nurses as angels, emerged from the data. An older woman viewed nurses as angels when nurses pat them while another one viewed them as nice when they did not shout. In the case below, a nurse's non-procedural touch conveyed comfort to that old woman:

When I felt sad or cried, they would come and pat me and told me not to cry, because that situation wouldn't last forever. They were angels, I am telling you. [P25, older woman, 70 years]

They are nice, because they don't get angry nor shout. [P18, older woman, 78 years]

I see a staff that is close to patients. They want to understand exactly what our problems are. They come here regularly to check the IV. They ask me how I feel. The touch me. I tell you, they are like little angels... Anyway, I feel that they are very close to patients. [P19, older man, 65 years]

Contextual Conditions

Under contextual conditions, older adults' interpretation of NVC and older adults' needs for NVC were identified. Participants reported that older adults can interpret nurses' NVC by interpreting nurses' facial expressions, physical appearance, and gestures. It means that older adults watched nurses' faces and gestures, and drew conclusions based on previous encounters with nurses or their personality. An older adult, a nurse, and a student nurse highlighted this point:

Yes, I do interpret their NVC. I watch a nurse's expressions when I talk to her about this and that. I always watch their faces. [P25, older woman, 70 years]

I think "reading" is not the correct word. Older patients interpret our gestures. [P9, specialized nurse, 6 years of experience]

Because you can come in the morning, greet with your best smile, but the older patient reads on your face that you are not okay even if you are smiling. [P16, student nurse, 26-35 years].

Concerning the needs for NVC, only nurses and student nurses mostly reported on needs of NVC. Two categories emerged from the data related to the needs for NVC: needs related to NVC and other needs, which included love and affection, reassurance, and good communication with nurses.

Table 1. Categories and Codes Derived from the Data.

Category	Codes
Core category	Nurses are angels
Contextual conditions	Older adults interpret nurses' NVC Older adults need nurses' NVC
Actions/interactions strategies	Nurses show concern and interest Nurses convey love or empathy Nurses give hope to older adults
Intervening conditions (hinderers)	Nurses use a commanding tone Nurses do not spend enough time with older adults Nurses convey anxiety Nurses treat older adults as objects Nurses do not show respect to older adults
Consequences	Older adults comply with and accept care Older adults do not avoid nurses Older adults are satisfied Older adults feel at home

Participants mostly highlighted that older adults need to be touched. One nurse admitted that she touched an older man on his private parts to cheer him up:

Yes, he smiled. He was happy. I told him that he could still remarry even though he is a widower. Then I touched him, his beard, and his sex to cheer him up, to value him. I laughed with him throughout. [P6, diploma nurse, 11 years of experience]

However, another nurse emphasized that male older adults do not want to be touched on their private parts, as reflected in the following comment:

Yes, they don't like it when we touch their private parts. It frustrates them when we touch their sex. Sometimes it even ruined the relationship established from the start. They don't want you anymore because you saw their sex. [P7, diploma nurse, 9 years of experience]

Active listening, a modality of NVC, was reported to be needed by older adults. This subcategory stemmed mainly from nurses who view older adults as people who need to be confided in because they have secrets and stories to tell. Reminiscence seems to be common in older adults as they tried to remember their past. Therefore, they need people to listen to them. One student concluded that older adults need to be listened to:

Either it's that attention because some older people just need someone to listen to them, and you gave them that attention. [P17, student nurse, 26-35 years old]

The use of hand gestures, another modality of NVC, was also mentioned by a nurse as an NVC need of older adults:

When I waved my hand, she also responded by waving and smiling. So, they need this communication with gestures. I don't know if speaking is difficult or annoying but hand gestures work. [P7, diploma nurse, 9 years of experience]

Humor, often accompanied by laughter, was also mentioned as something older adults need:

Usually, I talk with older people with a slightly funny tone, because I know they miss it. I don't make fun of them, but I know that they often need jokes. Just because someone is old doesn't mean he doesn't need jokes. [P11, diploma nurse, 13 years of experience]

Participants also reported on "other older adults" needs. The student nurses specially mentioned love or affection, which is viewed as empathy. In this study, most of the participants view older adults as children, and they concluded that older adults need affection as children do:

Older people are like children. They need affection just as we take care of newborns. If this communication does not exist, older patients might think they are mistreated because they are old. [P15, student nurse, 18-25 years old]

Yes, they need love. Everybody needs affection. I don't know anyone who lives without affection. We all need affection. [P17, student nurse, 26-35 years old].

Participants expressed that older adults need reassurance from nurses when they are hospitalized because they are anxious:

Every sickness itself makes older patients feel diminished. They need us to keep their spirits up. [P3, diploma nurse, 23 years of experience]

Finally, a nurse reported that older adults need good communication with nurses, although they do not always speak or understand French:

I have to use another method that is not verbal. Even if I speak in French and they don't understand, they must feel that there is communication going on. [P8, specialized nurse, 3 years of experience]

Actions/Interactions Strategies

Usually, angels are seen as doers of good things or protectors. This category describes what nurses did in order to be seen as angels. In this study, being an angel had different meanings for older adults. For some, it means that nurses showed concern and interest in older adults being healed. For others, being an angel means standing or sitting close to older adults, being kind and not irritating, or not having negative NVB. Negative NVBs in this study include frowning, not smiling, sighing, nodding the head, standing far from, looming over, having the back toward the patient, or talking on the phone. In the quote below, a positive look or eye gaze is highlighted:

They don't look at me badly. They look at me with kindness. All of them are kind. [P18, older woman, 78 years]

A further positive interpretation of NVC was love or affection. Older adults could watch nurses' NVBs and discerned that they conveyed love. One older adult mentioned that listening (active listening), sitting next to (physical proximity), smiling (kinesics), and touching (haptics) conveyed love as seen below:

When a person loves you, it means that she can even sit next to you to listen to what you have to say. [P21, older woman, 82 years]

When she sees me smiling or touching her, she feels valued, accepted, and not rejected. She feels that she is loved. [P3, diploma nurse, 23 years of experience]

Not only do older adults feel loved, they also feel at home when nurses use affective touch. Yet the hospital environment is very different from one's home but in this study, feeling at home includes a sense of belonging to a family:

When I touch him without gloves, it reassures him. I massage him, and he feels good, confident. He feels at home, like amid his family. [P10, nurse aid, 14 years of experience]

Patients are always concerned about their condition, and they look for reassurance from nurses, especially if their condition is critical. As angels, nurses give hope to older adults. In this study, older adults concluded that if nurses

smile or come closer to them, it means that their condition is not that bad. If their condition is critical and they are about to die, nurses will avoid coming closer to them or caring for them. They assumed that if they still receive care, there is still hope for them:

When a nurse smiled at me, it conveyed that she wanted me to be at peace and know that it is not that bad and they've got it under control. It assured me. [P25, older woman, 70 years]

When they look at you, they change their thoughts because you smiled. Even if they didn't get what you said, they saw your smile. What is certain, he knows that his sickness is not that bad. [P16, student nurse, 26-35 years old]

Intervening Conditions (Hindersers)

In this study, the intervening conditions were described as what nurses should not do in order to be seen as angels. They emerged from the negative interpretations of nurses' NVC and included not smiling, using a commanding tone, frowning, and being silent for too long. One nurse highlighted that nurses are difficult if they do not smile in contrast to being angels:

Nurses should always smile because older patients read us. They can pick up that we don't love them, that we are difficult. [P7, diploma nurse, 9 years of experience]

Nurses are not angels when they use a commanding tone or when they do not spend enough time with older adults, as reported by a nurse and a student nurse:

For instance, some nurses cannot speak in a soft tone. In that case, older patients think that we only shout and don't take good care of them. [P3, diploma nurse, 23 years of experience]

Maybe because he had issues at home, he comes and talks to the patients with a commanding tone. It appears as if he does not even have time to waste. [P15, student nurse, 18-25 years old]

The results also show that nurses are not angels when they conveyed anxiety. For instance, when nurses have negative facial expressions, such as frowning or having a sad face, the condition of older adults is perceived as critical:

When you make gestures, he feels that there is nothing serious. If you are rude, or if you frown when reading his report, the person will think that his situation is critical; his time to die has come. [P11, diploma nurse, 13 years of experience]

Patient-centered care includes the idea that patients should be "treated as persons." For nurses to be angels, they should not treat older patients as objects. One nurse said that older adults understand that they are being treated as objects when nurses are silent and do not say anything for an extended period:

In the case where you observed a nurse dressing a wound without saying anything for more than 30 minutes, the patient could think that she didn't want to communicate with him because he's an object. He would not accept her, because it might say that she took him as an object. [P2, middle unit manager, 32 years of experience]

Lastly, nurses are not angels when they are not showing respect to older adults. In this study, older adults feel unimportant or despised when nurses are cold or when they stand at a distance as reported by an older adult and a nurse:

When you are a cold nurse, I feel sad and unimportant. [P25, older woman, 70 years]

Older patients, as I said, are people who are one-step ahead of us. So, they can see how you stand by them, and they conclude that you esteem or despise them. [P8, specialized nurse, 3 years of experience]

Outcomes

The fact that nurses are seen as angels leads to consequences, where participants highlighted that older adults comply with and accept care, they are happy, and they do not avoid some nurses. Additionally, older adults feel loved and at home, and they have hope when nurses are angels. A preference for some nurses was mentioned by a nurse when nurses display negative NVBs, which leads to a relationship breakdown with the less appreciated nurses:

When you walk in with a stoned face, they know that you don't love them, and they, too, won't cooperate. They will instead wait for your nicer colleague. [P7, diploma nurse, 9 years of experience]

Compliance with and acceptance of care and treatment were also mentioned as consequences:

They may not accept the care offered by a nurse whose NVC doesn't favor them. For instance, an older patient receiving an injection may not cooperate with someone who doesn't usually smile. When the person that generally smiles with them comes, they accept the care easily. [P13, middle unit manager, 10 years of experience]

In addition, older adults appreciate it and are happy when nurses display positive NVBs, such as sitting close to them and smiling. Patient satisfaction is one of the desired outcomes of nursing care:

I like it when they sit close to me and smile with me. I am happy. [P20, older woman, 64 years old]

When nurses are angels, older adults feel at home, especially when nurses use affective touch. Yet the hospital

environment is very different from one's home but in this study, feeling at home includes a sense of belonging to a family:

When I touch him without gloves, it reassures him. I massage him, and he feels good, confident. He feels at home, like amid his family. [P10, nurse aid, 14 years of experience]

Discussion

This study aimed to conceptualize older adults' interpretation of and need for NVC in 2 hospital settings. All the participants, mostly nurses, highlighted issues about older adults' interpretation of NVC. The core concept that emerged from the data is nurses as angels. In the context of the study where older adults interpret nurses' NVC and have needs for NVC, nurses are seen as angels when they are concerned and interested in older adults, they are kind and close to older adults, and when they convey empathy. On the other hand, nurses are seen as angels when they do not use a commanding tone nor display negative facial expressions. Consequently, older adults do not avoid them, but rather comply with and accept the care offered. They also feel that they belong to a family and they have hope. This study contributes to responding to the call for more data on older adults in African countries.²⁷ The findings of our study also add to the existing empirical studies showing that older adults interpret nurses' NVC messages.^{18,28}

Action/Interaction Strategies

This study found that nurses are described as angels when they sit close to older adults, touch them affectionately, or do not shout at them. This is consistent with previous research conducted in the USA, where affective touch was interpreted as a sign of respect,²⁹ and comfort touch was associated with improved faith and belief in older adults.³⁰ However, in Japan, a handshake and a kiss on the forehead were inappropriate for older adults³¹ and a touch on the buttocks was perceived as if nurses were dominating older adults in USA.³² This confirms what one of the participants said about avoiding touching older adults inappropriately. It is true that nurses not only touch patients for vital signs checking or medication administration, but they also have countless physical contacts with patients that occur within the social context and everyday interactions.³³ This means that touch is instrumental or affective in healthcare encounters. Yet, affective touch can serve as one resource to display empathy to older adults.³⁴ In this light, nurses should first build a relationship of trust with older adults before engaging in affective touch,³⁵ they should adjust their NVC techniques to each patient,³⁶ and they should not impose touch on older adults.

In this study, older adults reported that they feel at home and loved when nurses touch them and sit close to them to listen to them. This is consistent with a study conducted in Canada where older adults expressed the need to be listened

to by healthcare workers.³⁷ Older adults in the Balkans described their relationship with the nurses that listened to them as that of friends or family members.³⁸ According to Peplau³⁹ (1952), nurses are expected to play six main roles, namely, stranger, teacher, resource person, counselor, surrogate, and leader. Although older adults and nurses are strangers when older adults are admitted, their evolving relationship should change from that of strangers to that of companions. Nurses should ensure a friendly, sincere and respectful relationship with older adults, to prevent non-compliance with care.

Intervening Conditions

Research has shown that limited time has been reported by patients to have a negative impact on communication.²³ In this study, it was found that nurses are seen as difficult when they do not spend time with older adults or do not speak to them. Likewise, in Israel, nurses who removed a catheter without looking at or talking to older adults were treated as absent,⁴⁰ and glancing at a watch to indicate being in a hurry was perceived as disinterest by older adults.³² Yet, the healthcare professionals' ability to communicate that they have time to listen is of great importance for patients. It has been shown to express older adults' feelings of being confirmed and being cared for in Denmark.⁴¹ Therefore, nurses are encouraged to spend enough time with older adults.

In this study, nurses were deemed difficult when they used a commanding tone. Likewise, the use of a high-pitched tone of voice was viewed as commanding and disrespectful,⁴² and speaking loudly was perceived as unfriendly and disrespectful.⁴³ The tone of speech could create a positive or a negative atmosphere in the ward⁴¹ and can be associated with elderspeak or baby talk, a form of patronizing communication,³¹ which should be avoided in healthcare interactions. Nurses are encouraged to adopt a person-centered tone and to be caring, polite, respectful, and supportive while avoiding a controlling tone, which is bossy, controlling, directive, and domineering.⁴⁴ However, in pandemics, where masks and physical distance are required, the meaning of a high-pitched tone can be different from nurses' perspective and older adults' perspective in the sense that nurses will be more likely to speak loudly to be understood.

Needs for NVC

An alternative to a controlling tone can be humor, which was reported by nurses as one of the needs for NVC. Having a sense of humor can reduce older adults' boredom and help them feel accepted.⁸ Humor is an indirect communication strategy that needs to be increased in clinical settings.⁴⁵ Another need expressed by the participants was affection. "Affection" is another word for empathy, which has been studied in healthcare encounters. Conveying empathy is an essential ethical aspect, which contributes to the quality of nursing practice⁴⁶ and helps one to understand the concerns,

experiences, and perspectives of older adults better, to take appropriate empathy-driven actions.⁴⁷ Although the hospital stay in acute settings is often shorter than in long-term care settings, nurses can still show affection to older adults through their positive NVBs.

Consequences of Interpretations

This study shows that there could be consequences of older adults' interpretation of nurses' NVC. Participants reported that older adults prefer nurses whose NVC favors them to nurses whose NVC does not, which leads to relationship breakdowns with some nurses. Likewise, in Pakistan patients expressed that they will avoid nurses that speak in a loud voice.⁴⁸ Another consequence reported was noncompliance with or resistance to care or treatment. Likewise, missed opportunities for PCCom and the use of elderspeak have been found to increase resistiveness to care.⁴⁹ Because nursing care is significantly positively related to medication communication,⁵⁰ nurses should ensure that older adults comply with care and treatment.⁵¹

Limitations

Although the intent of this study was not to conceptualize the interrelationships of NVC and geriatric care, 1 limitation in this study was that there was no equal participation of nurses and older adults about interpretations of and needs for NVC. Almost of the older adults were reluctant to express their opinions related to negative interpretations of NVC, which made the analysis of negative interpretations mostly stem from nurses' perceptions. Additionally, it could have been more interesting to describe the nurses' NVC across the different phases of the nurse-patient relationship described by Peplau,⁵² which are orientation, identification, exploitation, resolution, and termination.

Future Recommendations

The findings challenge nurses to look for ways to get messages across while delivering PCC, and that they should consider older adults' interpretation of and need for NVC. With increased NVC awareness, nurses can learn to modify their NVB to better meet older adults' psychosocial needs.⁵³ While there are possibilities of misinterpretation of NVC, our study suggests that older adults' interpretation of NVC guides better ways of communicating with them. Because today's student nurses will become tomorrow's nurses providing geriatric care,⁵⁴ evidence-based information regarding older adults' interpretation of and need for NVC should be available in nursing curricula. Healthcare institutions are encouraged to provide ongoing professional development programs for nurses to develop and deepen effective NVC skills with older adults in acute settings. Future researchers are invited to expand on both VC and NVC to understand PCCom in clinical settings. In times of COVID-19, norms

regarding NVC might be disrupted. For instance, when faces are covered, facial expressions are not as visible. In any nursing situation needing mask wearing, it will be difficult to see the facial expressions of nurses when covered by masks. Therefore, researchers are encouraged to explore the interpretation of NVC across preventive measures, such as social distancing and constant wearing of masks.

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3.2 Conclusion

This paper showed that older adults had both positive and negative interpretations of nurses' nonverbal communication. They saw nurses as angels, or as difficult, depending on the type of nonverbal behaviours displayed. The paper also showed that older adults had specific needs with regard to nonverbal communication. Yet, to provide patient-centred care, nurses should ensure that they attend to older patients' different needs and expectations (Mast and Kadji, 2018) as relates to nonverbal communication. To confirm if older adults' interpretation and needs of nonverbal communication were factored in, the next manuscript aimed at describing nurses' nonverbal communication techniques when caring for hospitalised older adults.

CHAPTER FOUR: NURSES' NONVERBAL COMMUNICATION STRATEGIES

4.1 Introduction

This chapter addresses the fourth objective of the study, which emerged as the core phenomenon in the proposed model. It comprises one manuscript submitted to an accredited journal and currently under review. It is worth noting that, before directing research towards maximising the usefulness of nonverbal communication techniques, a prior understanding of nurses' current practices is needed. Therefore, this chapter describes the strategies used by nurses and nursing students to communicate nonverbally with hospitalised older adults. This study took place before COVID-19 when there were no social distancing protocols restricting facial expressions, physical distance, and touch (While, 2021, Durkin et al., 2020, Mitchell and Hill, 2020). Therefore, there is no reference to COVID-19 in the manuscript.



Nurses' nonverbal communication strategies with older patients in two hospital settings

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Manuscript ID	Draft
Manuscript Type:	World Health
Key Words:	Gerontology/Geriatrics < Health of Specific Populations, Communication < Other, Nurse-patient relations/Nurse patient relationship < Other, Grounded theory < Research Methods, Nurse-midwifery < Nursing Practice

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Introduction

Older adults make up a significant proportion of the population in many countries (Mohseni et al., 2019). In sub-Saharan Africa, older adults are the second most rapidly growing population of all regions globally (Naidoo & Van Wyk, 2019). In 2019, there were 32 million older adults in sub-Saharan Africa, and this number is projected to reach 101 million in 2050, an increase of 218% (United Nations Department of Economic and Social Affairs Population Division, 2019). The rapid growth in numbers implies that the need for geriatric care will increase (Hammar et al., 2017), and that effective communication with older patients will be an essential nursing skill (Skoglund et al., 2018).

Effective communication with older patients is vital to understanding their needs, supporting their health and well-being (Hafskjold et al., 2016), respecting them (Daly, 2017), and establishing relationships with nurses (Wiechula et al., 2016). Communication is more complex than the transmission of information (Hammar et al., 2017), and it includes a nonverbal aspect (Zani et al., 2014). Nonverbal communication consists of interactions with or without speech, such as how we behave, how we sound, and what is expressed between each other (Blanch-Hartigan et al., 2018a). Nonverbal communication plays several roles, such as complementing, reinforcing, contradicting, or substituting verbal communication (Prochet & Silva, 2011). In communicative encounters, Nonverbal communication demonstrates respect for patients, fosters empathy and trust (Lorié et al., 2017), conveys affective and emotional information (Kee et al., 2018), and builds therapeutic relationships with patients (D'Agostino & Bylund, 2014). Body language affects first impressions and treatment adherence, and it results in a reduction of physical symptoms (Chahal, 2017).

Different modalities of Nonverbal communication have been described in the literature. They include vocalics (aspects of the voice), artifacts (the presence of physical and environmental objects), silences, chronemics (use and perception of time), proxemics (use of space and distance), haptics (use of touch), and kinesics (forms of movement of the body) (Boggs, 2015; Stanyon et al., 2016). In a recent review of nonverbal communication with older patients, it was revealed that touch and gestures are described as communication facilitators, while positive facial expressions by nurses demonstrate affection and respect toward older patients, and tone of voice contributes decisively to the success of interactions with older patients. By contrast, the expression of limited time by nurses has caused embarrassment in older patients,

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3 while speaking fast has been a communication barrier between nurses and patients (Author et
4 al., 2020). The studies included in the review were conducted mainly in long-term care settings
5 in high-income countries. There was no mention of a study conducted in hospital settings in
6 African countries.
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11 Concerns need to be directed to nurses' nonverbal communication with older patients, because,
12 although not all older adults experience communication challenges from sensory, cognitive or
13 complex health needs, for those that do, it can lead to reliance on nonverbal communication
14 (Gorawara-Bhat & Cook, 2011). Yet, nonverbal communication can give other meanings to
15 the relationship between nurses and patients (Rusu & Chiriță, 2017b), and inappropriate
16 nonverbal communication with older patients can lead to their being unwilling to cooperate
17 (Sundler et al., 2016). Because it is impossible not to communicate nonverbally (Blanch-
18 Hartigan et al., 2018a), nurses should not only understand patients, but they should also convey
19 understandable and acceptable messages to patients (Kourkouta & Papathanasiou, 2014) in a
20 nonverbal way. Therefore, the analysis aimed to describe how nurses communicate nonverbally
21 with older patients, and the rationale thereof.
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30 31 **Methods**

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33 The study design was qualitative with Grounded Theory as an approach. Grounded theory was
34 chosen as a strategy where new viewpoints are needed to explain a poorly understood
35 phenomenon (Corbin & Strauss, 2015), namely nonverbal communication between nurses and
36 older patients in hospital settings.
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41 42 ***Settings and participants***

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44 The study was conducted in two public hospitals, one each in the East and the Central regions
45 of Cameroon. This is because, unlike other African countries such as Mauritius, Seychelles,
46 and South Africa, there is no national effort to develop long-term care settings in Cameroon
47 (World Health Organization, 2017). As a result, older adults solely utilize hospital settings
48 when requiring medical assistance (Emeh, 2020; Gallo, 2019) where nurses communicate more
49 often with them. Also, there is only one geriatric unit in Cameroon. Older patients are mostly
50 admitted to the wards where they are mixed with younger adults and are categorized according
51 to their illness. The selected hospitals are both referral hospitals and are expected to have some
52 standards of care. Yet, in Cameroon, nurses in rural areas remain the predominant providers of
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health care services with a wide scope of practice ranging from patient consultation, prescription and minor surgery including circumcision (Nkwati, 2016). Therefore, the selected hospitals were chosen because nurses have a reasonable scope of practice there.

We aimed at recruiting participants with rich information on the phenomenon under investigation. Two groups of participants were recruited for the study: the older patients, and all categories of certified nurses including degree nurses, diploma nurses, specialized nurses, and nurse aides. Open sampling, and then later theoretical sampling were used to recruit nurses. The eligibility criteria were any experience in nursing care, involvement in the day-to-day care of older patients, articulation in English or French, and willingness to participate in the study. The first eligible nurses were approached in the nursing station when they seemed free and were provided with the information related to the study. Thereafter, they gave their consent to be overtly observed and interviewed during and about their interactions with older patients. After the first analyses, two unit managers and one nurse assistant were theoretically sampled and included in the study. Twenty nurses agreed to be observed, of which 13 nurses agreed to be interviewed thereafter. Additionally, 47 older patients were referred to the study, but 13 did not meet the eligibility criteria. These were proficiency in English or French, being in a noncritical condition, and voluntary participation. The eligible older patients were individually approached at the bedside when they seemed free with no visitors nor care activities happening. Of the 34 older patients who met the inclusion criteria, 29 who gave their consent were observed, of which eight were interviewed thereafter. A total of 21 participated in the study as described in Table 1. These included three nurse managers, nine staff nurses, one nurse assistant, and eight older patients.

Data collection

Data were collected between July 2018 and January 2020 through observations and individual interviews. The observations were conducted by the first author, and they focused on interactions between nurses and older patients during nursing interventions. The author first spent two weeks in the wards to familiarize herself with the environment, and so that the participants could become more familiar with her. An observation guide was used to observe the different nonverbal communication modalities, the types of communication, and the content of the interactions during the observations. Each observation lasted at least two minutes. The observations covered the nurses' everyday interactions with older patients, and they took place

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3 on different days, at different times, and in different places in the wards. It is worth noting that,
4 in this study, the types of communication observed were mostly task-related. One of the reasons
5 why most communication was task-related could be that, unlike the case in nursing homes
6 where older patients depend on nurses to assist them with taking medications, social activities,
7 and daily hygiene (Forsgren et al., 2016), in Cameroon, family members assist older patients
8 with hygiene and taking some medications. The older patients' family members are present in
9 the wards, and they alert the nurses when problems arise, thus reducing the duration of
10 interaction between nurses and older patients, and leaving nurses mostly with communication-
11 related to eight-hourly treatment administration.
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20 Individual interviews were thereafter conducted with older patients and nurses who have been
21 observed. Participants who agreed to be interviewed gave their permission for audio recording.
22 Data from the observations guided the development of the initial interview guide, which was
23 used to conduct individual interviews with participants. The interviews informed each other as
24 each interview was transcribed and analyzed before the next interview took place. The
25 interviews with the nurses were conducted in the nurses' office, and the interviews with the
26 older patients were conducted in the patient rooms, at times convenient for the participants.
27 Field notes were taken during the interviews to provide supporting information. All the
28 interviews were audio-recorded, and thereafter they were transcribed for analysis. Interviews
29 were stopped after data saturation, which was decided upon after the completion of all coding.
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38 *Data analysis*

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40 The interviews were transcribed verbatim, and they were checked against the audio recordings
41 for accuracy by the research assistant. NVivo 12 software was used to facilitate data from the
42 interviews and field notes. French interviews were translated into English by a translator, to
43 allow for peer review, and the English translations were translated back into French, to ensure
44 that the English translations maintained the same meaning as the original French transcripts.
45 Data analysis started with reading each transcript for familiarity. Corbin and Strauss's (2015)
46 method of analysis was used to examine and interpret the data, extract meaning and understand
47 and develop empirical knowledge. The methods used were open coding, axial coding, and
48 selective coding. The open coding was performed through a microanalysis consisting of
49 breaking down collected data to consider all possible meanings. The concepts ranged from
50 lower-level to higher-level concepts. Lower-level concepts were expressed in words similar to
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3 those used by the participants, and higher-level concepts were considered categories. After
4 creating concepts and categories that emerged from the data in the open coding phase,
5 categories and subcategories were grouped in the axial coding phase. A list of categories was
6 refined, by merging or deleting some categories, after making possible connections, depending
7 on the properties and dimensions of each category. Building on the open coding and the axial
8 coding, selective coding was performed, by relating the core category to other categories,
9 validating and refining those relationships.
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15 16 *Ethical considerations*

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18 The study received ethical approval from the University. Both hospitals granted written
19 permission to conduct the research. Participants were informed that participation would be
20 voluntary, that they could withdraw from the study at any time without consequences, and that
21 confidentiality and anonymity would be kept when reporting the results. Participants signed an
22 informed consent form and authorization to be audio-recorded.
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28 29 *Rigor*

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31 Credibility, transferability, dependability, and confirmability described by Lincoln and Guba
32 (1985) were followed to ensure trustworthiness. Credibility was ensured by prior and prolonged
33 engagement with participants to establish relationships with participants during the study. Peer
34 debriefing was done with two senior colleagues to confirm emerging categories and themes.
35 Confirmability was ensured by triangulating data sources (observations and interviews) and
36 validating audiotaped and transcribed transcripts against categories and themes through
37 constant comparison. Further, the first author confirmed what she observed during interviews
38 with the nurses, and went back to nine of the participants with the corresponding transcripts for
39 their validation and confirmation. Dependability was ensured by data quality checks through
40 consultation with expert seniors in grounded theory and peer review of coding by senior
41 qualitative researchers. Last, transferability was established by rich descriptions of informants,
42 study context, research procedures, and the provision of quotes from the interviews to enrich
43 findings.
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54 55 **Results**

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57 Two main categories were derived from the data: the types of nonverbal strategies used and
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3 the purposes of using nonverbal communication with older patients.

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5 ***Nonverbal communication strategies***
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8 Nurses were observed using nonverbal communication strategies to communicate with older
9 patients. Table 2 shows examples of the observations, which were mainly about kinesics,
10 haptics, and proxemics. Likewise, the participants mostly described kinesics, haptics, and
11 proxemics as nonverbal communication strategies used to communicate with older patients.
12 Table 3 summarizes the other nonverbal communication strategies described by participants
13 during interviews, namely, vocalics, artifacts, listening, chronemics, and physical appearance.
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18 ***Kinesics***
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21 Participants reported that they used movements of the body to communicate nonverbally with
22 older patients. One participant particularly mentioned movements of the hands and movements
23 of the face as seen below:
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27 *"So, you use hand gestures, facial expressions, eye gazes, all that to support what you*
28 *are saying to him."* [P1, degree nurse, 4 years of experience]
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32 An older patient mentioned eye gaze while a nurse mentioned scratching the head to refer to
33 kinesics as seen below:
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36 *"They smile a lot, they don't get angry nor give me a bad look. They look at me with*
37 *kindness."* [P14, older woman, 78 years old]
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40 *"Nurses should be aware that, even by scratching the head, they are sending a*
41 *message."* [P4, specialized nurse, 11 years of experience]
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45 ***Haptics***
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48 Participants also reported on the use of touch as a nonverbal communication technique. One
49 nurse mentioned affective touch to indicate presence as seen below:
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52 *"We touch the cheeks, we touch the hands. We greet, but touch his hand so that he feels*
53 *that we are here."* [P10, nurse aid, 14 years of experience]
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57 An older patient mentioned that nurses touched his hand to convey affection as seen below:
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"I am affectionately called Papa M. when they touch my hand." [P20, older man, 92 years old]

However, a nurse mentioned touching an older patient's private part, which was not approved by another nurse as it can ruin the relationship with older patients as seen below:

"... I told him that we could still get married, even though he is a widower. I touched him, his beard, and his private parts..." [P6, diploma nurse, 11 years of experience]

They [older patients] don't like it when we touch their private parts. It frustrates them when we touch their sex. Sometimes it even ruined the good relationship established from the start. [P7, diploma nurse, 9 years of experience]

Proxemics

Participants mentioned the use of the distance between nurses and older patients to describe a nonverbal communication strategy. One nurse reported that physical proximity was used to combat the marginalization of older people as seen below:

"I next to them [older patients] because some people run away from them because they are old. These are gestures that we must use especially with older people so that they understand that they are still useful to society and that we still need them." [P2, diploma nurse, 32 years of experience]

An older patient said that physical proximity is the expression of affection as seen below:

"When a person loves you, it means that she can sit next to you. It means that she even sits next to you to listen to what you say." [P17, older woman, 82 years of experience]

Purposes of nonverbal communication with older adults

The participants expressed their opinions about the purpose of nonverbal communication with older patients, which mostly stemmed from their views of older patients. One of the first reasons cited for using nonverbal communication was to build relationships with older patients. Nurses and patients are strangers upon admission of the patients, but their relationship should evolve. One participant said:

"When they come to the hospital, we don't know them, and they don't know us at first."

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[P5, unit manager, 30 years of experience].

Therefore, building relationships was crucial, and it started by initiating contact through hand gestures:

"Often, nonverbal communication is for initial contact. The first contact is always nonverbal. We say 'hello' and 'I am leaving' with a hand gesture." [P7, diploma nurse, 9 years of experience]

Once initial contact has been established, the nurses used nonverbal communication to get messages across, so that the older patients understood what they mean. The techniques that the nurses employed could indicate being in a hurry, being unhappy, or being serious. For instance, a nurse was observed using a loud voice when communicating with an older man who neither understood nor spoke French. During the interview, she reported raising her voice to indicate that she was serious about the treatment she was about to administer:

I raised my voice because you don't even know what to do. You want to do the intervention; he [an older patient] does weird stuff. You have to raise your voice to make him understand that what you are doing is serious. I wasn't irritated. I raised my voice because I wanted him to understand that what I was doing was serious. [P1, degree nurse, 4 years of experience]

Conveying a message was not the only purpose of nonverbal communication that was cited. Hospitals are stressful environments for nurses and patients. The participants reported using nonverbal communication to *"create a positive atmosphere"* [P1, degree nurse, 4 years of experience]. Creating a positive atmosphere was done so that older patients felt at ease despite their condition and still had hope that they would recover:

"We should get the older person to hope and keep living despite his current situation through our nonverbal communication. When you dance or sing with her or comb her hair, it teaches her what she can do after discharge, because hospitalization won't last for a lifetime." [P4, specialized nurse, 11 years of experience]

The participants also reported using nonverbal communication to win the trust of older patients, so that they accept the nurses and the care offered. Winning their trust started with reassurance:

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"I have a reassuring look at them to reassure them, because they feel abandoned, and marginalized. They believe that they are finished, that they are about to die. Well, people abandon them. But when they get to the hospital, we have to spice up their lives. That's why I reassure them with a smile." [P12, specialized nurse, 5 years of experience]

"The most important thing is to reassure them, to put them at ease. For example, we have older patients who see white uniforms around them and wonder why they have been brought here. It can cause them to withdraw and not open up. Also, those who do not usually frequent hospitals can be suspicious and think that they have been brought here because their time to die has come. So touch, smiles, sitting on the bed close to them gives them confidence." [P9, specialized nurse, 6 years of experience]

To ensure that the older patients' needs are met, the nurses reported that they used nonverbal communication to detect what the older patients did not say or did not want to say, as seen below:

"I use nonverbal communication to understand older patients because they don't always tell the truth. Generally, patients tell the truth but not all of the truth. So nonverbal communication allows us to understand the person better, detect what he does not say, or does not want to say." [P8, specialized nurse, 3 years of experience]

Nonverbal and verbal communication are both components of communication, and the participants reported that they used nonverbal communication to support verbal communication. The patients rely more on nonverbal communication when the health care providers' verbal and nonverbal communications are incongruent. In the study context, participants said:

"There are some older patients who don't speak French nor your own dialect" [P6, diploma nurse, 11 years of experience].

"I use nonverbal communication to support what I am saying, but it depends on who's in front of me. If you deal with someone who does not understand French, you use nonverbal communication, so that he understands what you want to tell him." [P1, degree nurse, 4 years of experience]

Finally, the participants mentioned conveying affection as another reason for using nonverbal

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4 communication:

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6 *“nonverbal communication can convey empathy and even affection to patients. You*
7 *have to love what you do, and love older patients because sitting next to them and*
8 *touching their shoulders takes love. I am not talking about falling in love, but it is about*
9 *knowing how to behave with older people because if you fall in love at some point, you*
10 *will stop being professional.”* [P5, nurse unit manager, 30 years of experience]
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15 Discussion

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18 The present study investigated nonverbal communication between nurses and older patients.
19 Research about nurses' nonverbal communication strategies with older patients is under-
20 represented within the worldwide scientific literature, especially when compared with the
21 number of studies focused on verbal communication (Pedrazza et al., 2015, 2017). Therefore,
22 our participants provide new insights into the value of nonverbal communication with older
23 patients within current clinical practice. It emerged from the study that nurses mostly used
24 kinesics and haptics in communicative encounters with older patients. Furthermore, the study
25 results showed that the nurses used nonverbal communication to initiate contact with older
26 patients, to get messages across, to create a positive atmosphere, to win older patients' trust, to
27 detect what older patients did not express, to support verbal communication, and to convey
28 affection to older patients. It is worth noting that geriatric care is fundamentally different to
29 pediatric care, and that sensibility to older patients' needs is crucial (Mononen, 2019). Thus,
30 nonverbal communication with older patients should depend on the older patients' needs.
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34 *Haptics:* The nonverbal communication strategy mostly used in this study was haptics. Haptics,
35 or communication by touch, can be aggressive, accidental, playful, or task-related, and it can
36 promote physical comfort or provide emotional support containment (Pedrazza et al., 2015).
37 Affective touch can serve as one of the resources to display empathy to older patients
38 (Mononen, 2019). In previous studies, haptics were used to joke with older patients in Japan
39 (Backhaus, 2009), to praise them for eating all their food in the USA (Carpac-Claver & Levy-
40 Storms, 2007), to convey attention in Canada (Small et al., 2015), and as a caring gesture in
41 USA (Levy-Storms et al., 2011). Before the COVID-19 pandemic, touching patients was part
42 of health care workers' daily activities (Pype et al., 2020). Nurses used touch to perform their
43 duties, such as inserting or removing catheters, dressing wounds, and assisting in personal care.
44 The rules of social distancing and increased use of personal protective equipment to reduce the
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3 transmission of COVID-19 have ended skin-to-skin touch between nurses and patients (Durkin
4 et al., 2020), thus creating an emotional barrier (Nist et al., 2020). Yet, touch can lead to
5 positive or negative outcomes (Pedrazza et al., 2017). Nurses should be mindful of how they
6 use touch in geriatric care. They should also enhance other nonverbal communication strategies
7 with older patients.
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13 *Kinesics:* Participants also mentioned kinesics as a nonverbal communication strategy.
14 Particularly, they referred to eye contact as one of the nonverbal communication strategies used
15 to communicate nonverbally with older patients. Eye behavior is often studied under kinesics,
16 but it pertains to its branch of nonverbal studies called oculusics (Hans & Hans, 2015).
17 Although there is scant research on eye contact in the discipline of nursing (Jongerius et al.,
18 2020), research has shown that eye contact is essential for building good relationships with
19 older patients (MacDonald, 2009), encouraging the expression of their psychosocial concerns
20 (Henry et al., 2012), and enabling a greater understanding of their needs (Freitas et al., 2014).
21 In previous studies, eye contact was used to create a positive atmosphere when caring for older
22 patients in Sweden (Johnsson et al., 2018), to initiate communication in the USA (Carpac-
23 Claver & Levy-Storms, 2007), to resolve disagreements, and to indicate acceptance or rejection
24 of older patients in Canada (Small et al., 2015). By contrast, gesturing as a sign of rejection or
25 disapproval interrupts the exchange of messages in Brazil (Borges et al., 2017). Therefore,
26 nurses should ensure that older patients correctly decode kinesics. While mouths are covered
27 by masks, rendering it difficult to observe the expression of smiles, nurses should understand
28 that older patients' interpretation of facial expressions that convey affective information mostly
29 relies on eye movements.
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44 *Vocalics:* Participants also referred to vocalics as a nonverbal communication strategy.
45 Vocalics are the aspects of the voice used when communicating with older patients. In this
46 study, speaking too loudly, too fast or even too slow was reported by participants. A particular
47 participant reported that she raised her voice to express seriousness to an old patient who did
48 not understand French. Yet, the tone of speech could create a positive or a negative atmosphere
49 in the ward (Timmermann et al., 2017). Also, vocalics are often associated with "elderspeak"
50 which includes oversimplifying the language, speaking at a slow rate or loud, and with a
51 demeaning tone (Williams, 2011). In contrast with other studies, nursing students used a loud
52 voice with older patients with impaired hearing to convey messages in Sweden (Hammar et al.,
53 2017), while, surprisingly, the use of a soft voice to ask an older adult to eat his food was not
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successful in USA (Carpac-Claver & Levy-Storms, 2007). Speaking calmly contributed to creating mutual trust in the Balkans (Sorensen, 2009), and a friendly tone helped to increase getting to know older patients in Sweden (Johnsson et al., 2018). Afriyie (2020) argued that patients may be unhappy and reluctant if they feel patronized or dictated to. Additionally, Jarvis and Smith (Jarvis & Smith, 2021) reported that when they increased their voice volume to be heard by older patients, they realized that it posed “a risk for the misimpression of inequitable power”. With the rules of social distancing and hearing impairment in some older adults, the meaning of a loud voice can be ambiguous. Vocalics should therefore be interpreted with caution in geriatric care (Hammar et al., 2017), shouting vs talking loudly. Nurses are encouraged to assess when to raise their voices or not to communicate the right emotion to the patients. For instance, when they need to raise their voice to be heard, nurses should associate facial expressions that support the reason for raising their voices. Nurses should avoid using commanding and demeaning tones when talking to older patients because commanding tones have been associated with negative health outcomes such as resistiveness to care (Corwin, 2017).

Artefacts refer to the use of objects during communication. Nurses can use objects to communicate a message to patients. In this study, some participants reported that they show a bottle or the medication to some older patients who did not understand French to express the time to drink the medication. It was followed by a change of position by the older patient, showing that he understood the message and was ready to swallow his tablets. This is consistent with Jirwe, Gerrish and Emani (2010) who reported that student nurses showed patients equipment to try to convey a message when there was a lack of shared language between the students and the patients in Sweden. On the other hand, participants referred to the use of cell phones while administering care. In this study, it was observed that some nurses were receiving calls or chatting during care. A nurse acknowledged this as rude and disrespectful. Nurses are therefore encouraged to use objects like material or equipment to communicate information to older patients when necessary to avoid confusion.

Physical appearance refers to how nurses dress when they come to work. Nurses are compelled to wear uniforms but the cleanliness and the overall aspect of the uniform depend on individuals. As described by one participant, a nurse with a uniform can still look like a drug addict. Another one said that a nurse with a see-through uniform could sexually provoke male older patients. Physical appearance can be a powerful transmitter of intentional or unintentional

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messages (Ali, 2018). How we appear or dress gives away information we would prefer others not to notice about us (Gheorghita, 2012). Therefore, nurses need to be aware that their physical appearance influences effective nonverbal communication with older patients, and thus the care they render. Nurses should have a clean, neat and decent look when they are in front of patients even if they have a sight impairment, within the boundaries of what is culturally acceptable.

To build relationships: Participants mentioned that they used nonverbal communication to build relationships with older patients. It is worth noting that by communicating, individuals create relationships (Rusu & Chiriță, 2017a) that can lead to changes in attitudes and behaviors (Sumijati et al., 2020). Effective nurse-patient communication has been proven fundamental to building a positive relationship between nurses and patients (Madula et al., 2018). Hence, this model advocates for nurses to use one or more channels of nonverbal communication to express their willingness to build relationships with older patients. For instance, eye contact, affective touch and smiles have been reported as important to establish nurse-older patient relationships (de Guzman et al., 2019). Although older patients and nurses are strangers when older patients are admitted, their evolving relationship should change from that of strangers to that of companions (Peplau, 1991). Nurses should ensure a friendly, sincere and respectful relationship with older patients to allow compliance with care and treatment.

To support verbal communication: Participants further mentioned that they used nonverbal communication to support verbal communication. Communication has two components namely verbal and nonverbal. The differences in the native languages of nurses and patients create communication barriers (Guvenc et al., 2016). However, nonverbal communication exists even when there are no spoken words. Yet, verbal communication and nonverbal communication can conflict with each other in one interaction (Blanch-Hartigan et al., 2018b). When verbal communication is incongruent with nonverbal communication, patients believe the nonverbal (Gorawara-Bhat et al., 2017). For instance, one study reported that although a nurse was communicating with an older adult about her medication, her body language was interpreted as irritability by the patient (Blanch-Hartigan et al., 2018b). Therefore, nurses are encouraged to ensure the congruency of both verbal and nonverbal communication.

To create a positive atmosphere: Participants reported that they used nonverbal communication to create a positive atmosphere. The hospital environment is stressful for older patients. The noise of machines, the unfamiliar health care workers and environment, the pain, the discomfort, and the uncertainty of death lead to patients' emotional fluctuations (Arkorful et

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3 al., 2021) in an atmosphere of fear and anxiety. Nurses can use nonverbal communication to
4 create a positive atmosphere or to change a negative atmosphere into a positive one. It has been
5 shown that a soft tone can create a positive atmosphere in the ward (Timmermann et al., 2017).
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7 A smile when walking into an old patient's room can make a difference. On the other hand, the
8 worrisome faces of some of the nurses, maybe due to personal problems and/or death anxiety
9 due to the prolonged exposure to ill older patients, were evident enough to be noticed by one
10 older patient in this study. According to the same participant, this created a negative
11 atmosphere in the ward. The observation of this participant is attested to by McKenzie and
12 Brown who, in their study, reported that death anxiety has been found to have a direct negative
13 impact on nurses' capacity to perform their role effectively (McKenzie & Brown, 2017).
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21 *To convey empathy:* Many participants agreed that one of the other purposes of effective
22 nonverbal communication with older patients is to convey empathy. Empathy is the ability to
23 understand and share another person's emotions (Yoo et al., 2020). In other words, nurses are
24 expected to understand older patients' emotions and nonverbally express their understanding
25 and sharing of those emotions. Conveying empathy contributes to the quality of nursing
26 practice (Teófilo et al., 2019). For instance, nurses can use affective touch to convey empathy
27 to older patients (Mononen, 2019). Yet the experience of empathy between nurses and older
28 patients is affected by the aging process, which involves coping with the losses resulting from
29 the progressive decline in the ability to adapt as well as changes imposed by chronic diseases
30 (Teófilo et al., 2019). This should not prevent nurses from communicating to older patients that
31 they are compassionate, interested and concerned about their situations. Knowing the changes
32 that older adults undergo concerning their physical, psychological, social and environmental
33 health will help to better understand older patients (Attafuah et al., 2022).
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44 **Implications**

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47 The results obtained challenge nonverbal communication researchers to develop a consistent
48 set of validated measures for research on nonverbal communication, and to explore ways to
49 find nonverbal communication default patterns. Using similar measures would facilitate
50 comparisons across studies and an understanding of the links between nonverbal
51 communication and outcomes (Henry et al., 2012). Although communication is bidirectional,
52 nurses are responsible for its proper conduct (Kourkouta & Papathanasiou, 2014). Therefore,
53 there is a need to increase nurses' awareness of effective nonverbal communication skills.
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Furthermore, because older adults are frequently exposed to the services rendered by nurses and nursing students (de Guzman et al., 2019), nursing students need support during their training to be prepared with the necessary communication skills to meet the demands of gerontological care (Skoglund et al., 2018). Although caring for older adults in some societies is considered a good deed or a religious and moral obligation (Abudu-Birresborn et al., 2019), nonverbal communication is a skill that needs to be taught while being treated with cultural sensitivity. How nurses communicate depends on their previous experiences, as well as the organizational context. Therefore, organizations should enable nurses to use person-centered nonverbal communication with older patients. Finally, future interventions should explicitly address nurses' challenges associated with using nonverbal communication with older patients in limited-resource health care systems.

Limitations

The first limitation is the number of older patients included in the study. A greater number of older patients could have enriched the findings. However, as confirmed by Hall, Longhurst and Higginson (2009) and Lam et al. (2018), there were difficult to conduct research with older adults because of the lack of trust in the researcher, lack of interest in the topic, and the difficulties to obtain consent. In addition, most of the older adults could not speak French or English. Another limitation is that the observations were overt and not video-recorded, meaning that the findings only on what the participants reported having happened as well as the interpretations of the observations done. Video recordings of interactions could have captured more details that might not have been captured by the researcher.

Clinical resources

National Institute of Aging. Tips for Improving Communication with Older Patients. <https://www.nia.nih.gov/health/tips-improving-communication-older-patients>

National Institute of Aging. Doctor-Patient Communication. <https://www.nia.nih.gov/health/doctor-patient-communication>

Nursing Center. Gerontology. <https://www.nursingcenter.com/clinical-resources/practice-specialties/gerontology>

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Table 1: Characteristics of the participants

Participant	Age (years)	Gender	Hospital	Position	Types of nurses	Years of experience
P1	26 - 35	Female	Hospital 1	Staff nurse	Degree nurse	4
P2	46 - 55	Female	Hospital 2	Middle manager	Diploma nurse	32
P3	36 - 45	Female	Hospital 2	Staff nurse	Diploma nurse	23
P4	36 - 45	Male	Hospital 2	Staff nurse	Geriatric nurse	11
P5	46 - 55	Female	Hospital 2	Unit manager	Geriatric nurse	30
P6	46 - 55	Female	Hospital 2	Staff nurse	Diploma nurse	11
P7	36 - 45	Female	Hospital 2	Staff nurse	Diploma nurse	9
P8	26 - 35	Female	Hospital 2	Staff nurse	Geriatric nurse	3
P9	26 - 35	Female	Hospital 2	Staff nurse	Geriatric nurse	6
P10	26 - 35	Female	Hospital 2	Staff nurse	Nurse aid	14
P11	36 - 45	Female	Hospital 1	Staff nurse	Diploma nurse	13
P12	36 - 45	Female	Hospital 2	Staff nurse	Geriatric nurse	5
P13	26 - 35	Female	Hospital 1	Middle manager	Degree nurse	10
P14	78	Female	Hospital 1	N/A	N/A	N/A
P15	65	Male	Hospital 2	N/A	N/A	N/A
P16	64	Female	Hospital 2	N/A	N/A	N/A
P17	82	Female	Hospital 2	N/A	N/A	N/A
P18	67	Male	Hospital 2	N/A	N/A	N/A
P19	61	Male	Hospital 1	N/A	N/A	N/A
P20	92	Male	Hospital 2	N/A	N/A	N/A
P21	70	Female	Hospital 2	N/A	N/A	N/A

Table 2: Selected examples of NVC strategies observed

NVC strategy	Type of NVC
Touching the hand, foot, shoulder, eye, chin, forehead, hair, back, cheek, leg	Haptics (use of touch)
Caressing	
Kissing	
Tapping the lap	
Smacking the leg	
Pulling one's arm	
Hugging	
Massaging	
Blowing on the hand	
Eye gazing	
Hand gesture	
Smiling	
Pointing	
Frowning	
Nodding	
Singing	
Humming	
Laughing	
Clapping hands	
Not smiling back at patients	
Sighing	
Opening the eyes widely	
Not looking at the patient	Proxemics (use of space and distance)
Leaning forward	
Being close	
Standing at a distance	
Sitting on the bed	
Moving from the side to the front	
Having the back toward the patient	
Standing at the door	
Looming over	Vocalics (aspects of the voice)
Having hands in the pocket	
Loud voice	Silence
Saying nothing	Listening
Listening	Artefacts (presence of physical and environmental objects)
Showing a cup	
Pulling a chair with a noise	
Talking on or looking at the phone	

Table 3: Selected examples of other NVC strategies described by the participants

NVC strategy reported	Participant
Listening	
"Usually, when you smile or take time to listen to them, because they like talking and telling you stories, they are more receptive."	[P13]
"There are rude behaviors that you should not have. For example, when he speaks, you should allow him to talk and listen to him attentively without interrupting him."	[P8]
"Certain things make them angry very easily like not listening when they speak. So active listening is very important to them."	[P10]
Artifacts (presence of physical and environmental objects)	
"I make signs with my hands to indicate the time to drink medication, and I show him the medication he should take."	[P12]
"Sometimes I don't speak to the patient but I'm on the phone; I have sent a message that the patient has already decoded."	[P4]
"When you want them to know the time, you can show them a watch. So, we can use objects to pass a message, depending on what we want to tell the person."	[P8]
Chronemics (use and perception of time)	
"So, you have to sit close to him, take some time, and make him swallow his food slowly."	[P7]
"We had patients who were not talking to us when they arrived, they refused to eat; but as we spent more time with them, they started to give in."	[P8]
"NVC is fostered when you have time for patients."	[P11]
Physical appearance (body type and clothing)	
"When he sees X or Y walking, by the outfit he respects you. When someone who wears tight jeans with a see-through white top moves around, it has an impact. Patients are no more focused. They only admire you with lust."	[P1]
"I forgot to mention that even the physical appearance is part of NVC. If you dress like a hemp smoker; a message has been sent. He would say that a monkey has touched him if you touch him with your long fake nails."	[P4]
"Even the way you dress, your clothing, your physical appearance is part of NVC. It says something about your personality. The way you dress reflects you. How you dress sends a message."	[P6]
Vocalics (aspects of the voice)	
"They will rather wait for your colleague who is nicer if you shout too much at them. But sometimes we have to shout although it is not the ideal."	[P9]
"They don't bother me nor shout at me. Since I came, I haven't been scolded at."	[P19]

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"Maybe because she [the nurse] had issues at home; she came and asked me about my medication with a commanding tone. It appeared as if she did not have time to waste."	[P21]
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For Peer Review

4.2 Conclusion

This manuscript revealed that nurses and nursing students mainly used haptics, kinesics, and vocalics to communicate nonverbally with hospitalised older adults, which are not enough to achieve effective communication. However, with the advent of COVID-19, new norms and rules about nonverbal communication have emerged and need to be studied. For instance, the rules of social distancing have put an end to skin-to-skin touch between nurses and patients (Durkin et al., 2020), while the constant use of masks has concealed part of nurses' and patients' faces (Carbon, 2020; Ross and George, 2022). Additionally, more studies need to be conducted on how slightly positive attitudes towards older adults, described in the next chapter, are translated into positive nonverbal communication techniques with them in clinical settings.

CHAPTER FIVE: ATTITUDES TOWARDS OLDER ADULTS

5.1 Introduction

Chapter 4 addresses the fifth objective of this study, which emerged as one of the intervening conditions in the proposed model. It is comprised of three published articles. The first paper in this chapter explores the attitudes of nursing students towards older adults in two schools. Attitude is a terminology that has been defined as judgmental phrases that a person has over an object, person, or event under review (Robbins and Judge, 2021). Attitudes are reflected through cognition and affection, and influence behaviours (Lee, 2015). Concerning students, attitudes towards older adults are patterns of feelings and beliefs held either in positive or negative ways (Kim et al., 2004). Nursing students' attitudes towards older adults and ageing are likely to affect their nursing behaviours, as well as both their career choices and the quality of care provided to older adults (Hanson, 2014; López-Hernández et al., 2021).

The attitudes of students were assessed through two versions of the Kogan's attitudes towards old people scale, namely the original English and the French ones. The second paper (See annexure 23) reveals the need to compile studies on attitudes towards older adults in African countries to answer the UN (2016) call for more data on older adults from African countries, because only a few studies had been conducted in African countries by 2020 (Eltantawy, 2013; Oyetunde et al., 2013; Zverev, 2013). Finally, the third paper describes the psychometric properties of the French version of the KOP scale used to determine students' attitudes. As a positive or a negative attitude towards older adults influences the quality of care provided (Hanson, 2014, López-Hernández et al., 2021), thus the communication with them, it was necessary to know the attitudes of nursing students who will take care of older adults in the near future.



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Cameroonian nursing students' attitudes towards older adults

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ABSTRACT

Background: Studies have examined nurses' attitudes towards older people (ATOP), yet only a few were conducted in African countries.

Objectives: To examine the nursing students' ATOP in Cameroon.

Method: A cross-sectional descriptive study was conducted. The sample consisted of 316 nursing students registered in two nursing schools. Data were collected between March and April 2018 using both English and French versions of Kogan's attitudes towards old people scale.

Results: The results showed a slightly positive ATOP. The average positive attitude score was 60.41 (± 8.69), the negative attitude score was 53.23 (± 8.78), and the total score was 113.65 (± 10.63). Cronbach's coefficient was 0.66 for the English scale and 0.62 for the French version. Some sociodemographic characteristics were statistically associated with students' ATOP.

Conclusion: The results indicate that nursing students have a slightly positive ATOP. Geriatric courses should be included in nursing curricula to create a more positive ATOP among nursing students. The psychometric properties of the French version of the Kogan's scale should be sought.

1. Introduction

Worldwide, the population is aging (UN Department of Economic and Social Affairs Population Division, 2015). Factors such as nutrition, healthcare, sanitation, education and economic wellbeing improvements are drivers of world population ageing (UN Population Fund, 2016). In 2017, there were 962 million older adults worldwide and will reach 2.1 billion by 2050 (United Nations Department of Economic and Social Affairs Population Division, 2017). In developing countries, the older population increases more rapidly than in developed countries (Pillay & Maharaj, 2013). The decline in fertility rates, the HIV/AIDS epidemic, improved life expectancy at birth, healthcare delivery systems and the reduction of child mortality, has led to larger numbers of people surviving to old age in Africa (Nabalamba & Chikoko, 2011). Statistics report that older adults represented 3.6 per cent of the African population in 2010 (Nabalamba & Chikoko, 2011), were 46 million in 2015 in sub-Saharan Africa and will reach 67 million in 2050 (United Nations Department of Economic and Social Affairs Population Division, 2017). In Central Africa, eight per cent of the population will be 60 years and over in 2050 (Pillay & Maharaj, 2013). In Cameroon, they constituted 5.2 per cent of the population in 2016 (Bureau Central des Recensements et des Etudes de Population, 2016).

Despite the fact that aging is not an illness (Erdemir, Kav, Citak,

Hanoglu, & Karahan, 2011), old age is characterized by complex health states (WHO, 2016). Older adult healthcare needs are more complex and chronic (WHO, 2015) and healthcare services use is more frequent than in the younger population (Kydd, Touhy, Newman, Fagerberg, & Engstrom, 2014). Additionally, more healthcare workers will spend more of their working time with older adults (Flores, 2016). Consequently, nurses have the greatest potential for influencing older adult care (Rush, 2017), and will continue to care for older adults (Pope, 2012). Yet, older adults require specialized nursing knowledge, skills, and attitudes, to achieve positive outcomes and prevent geriatric syndromes (Tagliarieni, Cline, Mengel, McLaughlin, & King, 2012). Therefore, to identify negative ATOP (ageism) should be of concern for nurse educators (Little, 2017).

2. Background

Throughout civilization, young people have provided evaluations and judgments around older populations (Sarabia-Cobo & Pfeiffer, 2015), eliciting stereotypes about the realities and circumstances of old age (WHO, 2013). When beliefs/ideas are associated with positive/negative connotations, they become attitudes (Sarabia-Cobo & Pfeiffer, 2015). Attitudes are the expression of beliefs, feelings, and past experiences regarding an object/concept and are reflected through

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cognition and affection influencing behaviours (Lee, 2009). Nursing students having negative stereotypes of older adults, have detrimental effects on the care provided (Hanson, 2014).

Studies have reviewed nurses' ATOP (Y.-e. Liu, Norman, & While, 2013; Neville & Dickie, 2014). Since 2013, there are published reports of studies conducted on nursing students' ATOP, in different countries, and in various translations. These countries include European countries such as Turkey (Ayoğlu, Kulakçı, Ayyıldız, Aslan, & Veren, 2014; Söylemez, Küçükgüçlü, Tekin, Ergin, & Yaman, 2018; Turan, Yanardag, & Metintas, 2016), Sweden (Darling, Sendir, Atav, & Buyukyilmaz, 2017), Italy (Matarese, Lommi, Pedone, Alvaro, & De Marinis, 2013), and Portugal (Almeida Tavares, Silva, Sá-Couto, Boltz, and Capezuti, 2015). Asian countries include Sri Lanka (Rathnayake, Athukorala, & Siop, 2016), Israel (Vitman-Schorr, Iecovich, & Alfasi, 2014), China (Zhang, Liu, Zhang, Meng, & Liu, 2016), Thailand, Myanmar and Indonesia (Runkawat et al., 2016). African countries such as Nigeria (Faronbi, Adebowale, Faronbi, Musa, & Ayamolowo, 2017; Oyetunde, Ojo, & Ojewale, 2013), Egypt (Eltantawy, 2013), Malawi (Zverev, 2013), and the United States of America (King, Roberts, & Bowers, 2013) are included. The results show conflicting results of nurses' ATOP. Some studies reported on positive ATOP while others reported on negative attitudes. No reports on studies conducted in Cameroon were found.

3. Problem statement

Student nurses' perceptions and attitudes towards older people affect their behaviour (Tuohy, 2003), possibly their career choices and/or possibly the quality of care provided to older adults after graduation (Carlson & Idvall, 2015). Although numerous student nurse ATOP studies exist in the context of Europe, USA, Asia and some African countries one has yet to be conducted for Cameroon. Culture influences attitudes towards caring for older adults (Hanson, 2014), and thus there is a need to explore ATOP amongst student nurses from Central Africa.

4. Method

After ethics clearance (No HSS/2008/017D) was obtained, nursing students' ATOP was assessed using a cross-sectional descriptive design.

4.1. Sampling

Purposeful sampling was employed, selecting two nursing schools. One offers undergraduate and postgraduate nursing programs, up to PhD level, and the other offers a two-year program in geriatric nursing for diploma nurses. Convenience sampling was then conducted during a single day visits to the classrooms at each site. The inclusion criteria included proficiency in French or English, student registration at the nursing school, and presence at school on the day of data collection.

4.2. Instrument validation and reliability

A previously validated and reliable KOP was used (Kogan, 1961b) which had two sections 1) socio-demographic variables and 2) an equal amount of positive and reverse negative statements making unfavourable reference to older adults. The scoring of respondents' answers were: (1) strongly disagree, (2) slightly disagree, (3) disagree, (4) agree, (5) slightly agree, and (6) strongly agree. However, a score of (4) was given when respondents failed to answer a question, as suggested by Kogan (1961a) and Kogan (1961b).

The reliability of the instrument was ascertained through a pilot study on 59 French students and 5 English students, different from the study population, but with similar characteristics. Cronbach alpha scores of 0.63 and 0.71 were obtained for the French and the English versions respectively.

5. Data collection

Data were collected between February and April 2018, after obtaining voluntary written consent from respondents. The researcher and two research assistants made arrangements, with the support of the nurse educators, to address the respondents in class. The study purpose was explained and the self-administered questionnaires from voluntary respondents were returned on the same day.

5.1. Data analysis

Data were analyzed using SPSS software package version 25. Descriptive statistics were performed to describe the sociodemographic characteristics of respondents. Thereafter, a composite score was computed for negative ATOP, positive ATOP, and overall student ATOP. Scores were obtained by: Positive score – adding positive items separately from negative items. Negative score - negative statements were reversed. Total score – both positive and negative scores were added together. Pearson's correlation examined the association between variables. To test whether students reported similar levels of attitudes, t-tests and one-way ANOVA tests were applied. Reliability was examined through Cronbach's alpha coefficients. A p-value < 0.05 was considered significant.

6. Ethical considerations

The study was approved by the Human and Social Sciences Research Ethics Committee of the University of KwaZulu-Natal (No HSS/2008/017D), on receipt of gatekeeper approval from the two nursing schools. Respondents received a written information letter and consent form before distribution of the questionnaires. The coded self-administered questionnaires with their signed consent forms, were simultaneously collected in separate sealed boxes. Neither the respondents' names nor the school names are disclosed in any report.

7. Results

7.1. Demographic data

A total of 396 questionnaires were distributed and only 316 were returned. The response rate was 79.79%. The sociodemographic characteristics of 316 nursing students are presented in Table 1. The results show that 41.1% (n = 130) were between 20 and 24 years old while 8.9% (n = 28) were below 20 years. Seventy-five per cent (n = 237) were female. > 36% (n = 115) were found in the third-year degree and the bridging programs. Eighty-two per cent (n = 259) previously lived with an older person, and 71.2% (n = 225) grew up in urban areas. The majority of respondents (94.3%, n = 298) were Christian and 69.6% (n = 220) were not taught nonverbal communication with patients.

7.2. Students' ATOP

Overall, table 2 shows that Cameroonian students had a slightly positive ATOP (mean = 113.65 ± 10.63) scores ranging from 81 to 156. The negative attitudes mean was 53.23 (± 8.78) while the positive attitudes mean was 60.41 (± 8.69). Students completing the French version of the questionnaire had higher positive scores (mean = 126.56 ± 13.50) than students completing the English version (mean = 120.60 ± 18.05).

7.3. Association between demographics and attitude scores

The results show that there was a statistically significant difference (p = .006) in the overall ATOP with age. Respondents aged 30 and above had more positive attitudes than the younger respondents (mean = 117.40 ± 10.51). In addition, those who grew up in a rural

Table 1
Sociodemographic characteristics of the respondents (N = 316).

Characteristics	N	%
Age of the respondents		
Missing	2	0.5
Range		
< 20	35	8.9
20–24	169	42.8
25–29	103	26.1
> 30	86	21.8
Gender of the respondents		
Male	97	24.6
Female	289	73.2
Missing	9	2.3
Year of study		
Missing	0	0.0
Range		
First year degree program	70	17.7
Second year degree program	61	15.4
Third year degree program	69	17.5
Bridging program	70	17.7
First year diploma program	48	12.2
Second year diploma program	49	12.4
Third year diploma program	13	3.3
First year geriatric nursing program	2	0.5
Second year geriatric nursing program	13	3.3
Respondents who have lived with an older adult		
Yes	311	78.7
No	67	17.0
Missing	17	4.3
Area where respondents grew up		
Rural	93	23.5
Urban	274	69.4
Both	20	5.1
Missing	8	2.0
Religion of the respondents		
Christian	365	92.4
Moslem	13	3.3
Traditional	8	2.0
Missing	9	2.3
Whether respondents were taught nonverbal communication with patients		
Yes	105	26.6
No	251	63.5
Missing	39	9.9

place (mean = 51.25 ± 9.41) were found to have less negative attitudes than those who grew up in an urban area (mean = 53.65 ± 8.21). This difference was statistically significant (p = .008). Furthermore, those who were taught nonverbal communication had more positive attitudes than those who were not, for both positive attitudes (p = .004) and overall attitudes (p = .056). No significant association was found with the other demographics (Table 3).

8. Discussion

This study showed Cameroonian nursing students had a slightly positive ATOP. This study found nursing students of all ages, genders, language, and year of study in two nursing schools in Cameroon were

Table 3
Respondents' attitudes across demographics.

	Respondents' negative attitudes towards OP		Respondents' positive attitudes towards OP		Respondents' overall attitudes towards OP	
	M	SD	M	SD	M	SD
Age						
< 20	51.88	9.14	59.03	9.51	110.91	8.14
20–24	52.52	9.02	60.62	8.48	113.74	11.07
25–29	53.56	7.74	58.80	8.64	113.39	10.96
> 30	55.26	9.37	62.13	8.64	117.40	10.51
	F = 2.134, p = .96		F = 1.525, p = .208		F = 4.220, p = .006	
Gender						
Male	52.30	8.22	60.71	9.06	113.01	10.57
Female	53.60	8.98	60.65	8.61	114.26	10.93
	t = -1.241, p = .215		t = 0.060, p = .952		t = -0.965, p = .335	
Year of study						
LSI 1	52.19	9.60	60.66	8.09	112.84	8.60
LSI 2	52.34	8.30	60.52	7.89	112.87	10.06
LSI 3	55.22	9.19	59.27	9.26	114.19	12.15
LSI B	53.92	8.98	61.50	9.85	114.92	13.00
IDE 1	51.02	7.83	62.46	7.36	113.48	8.51
IDE 2	54.28	9.17	60.35	9.81	114.63	1.85
IDE 3	56.64	6.12	57.54	8.13	114.18	9.71
LSI S1	44.00	1.41	55.00	7.07	99.00	8.48
LSI S2	53.17	8.10	65.36	5.92	118.73	9.14
	F = 1.617, p = .118		F = 1.181, p = .310		F = 1.025, p = .417	
Respondents who have lived with an older adult						
Yes	53.12	9.26	60.85	8.44	113.98	11.11
No	53.64	7.18	59.04	9.64	112.68	9.46
	t = -0.423, p = .673		t = 1.528, p = .127		t = 0.881, p = .379	
Area where respondents grew up						
Rural	52.22	9.92	61.82	8.88	114.04	11.37
Urban	53.44	8.23	60.17	8.55	113.62	8.66
Both	56.17	11.70	59.23	10.41	115.70	16.32
	F = 1.647, p = .174		F = 1.399, p = .248		F = 0.324, p = .724	
Religion						
Christian	53.20	8.86	60.76	8.53	113.97	10.96
Moslem	55.58	8.51	59.33	11.20	114.92	8.66
Traditional	54.00	9.36	56.86	13.87	110.86	10.75
	F = 0.441, p = .644		F = 0.825, p = .439		F = 0.330, p = .719	
Been taught on nonverbal communication with patients						
Yes	55.68	9.28	62.52	8.15	115.21	12.41
No	53.64	8.58	59.59	8.73	113.32	9.66
	t = -0.922, p = .357		t = 2.861, p = .004		t = 1.580, p = .115	

generally positive toward older people. However, 25.6% (n = 81) were not positive toward older people, while 74.4% (n = 235) were very positive toward older people. As such, it appears that some students need to have directed education to help them become more positive toward older people, as they may not be able to care for them in the future fairly and without discrimination. Regardless, all students would benefit from some additional education given population aging to ensure that they are able to effectively care for older people.

In comparison to other studies, students from Turkey averaged their positive ATOP at 145.35 ± 16.08 (Söylemez et al., 2018), at 130.93 ± 14.63 (Turan et al., 2016), and at 125.70 ± 15.13 (Ayoğlu et al., 2014). Additionally, students from Sweden averaged their positive ATOPs at 122.99 ± 11.5 (Darling et al., 2017) while students from

Table 2
KOP Scale total and sub-dimensions.

	Mean	SD	Min max	Cronbach Alpha	Best Cronbach alpha if item is deleted
KOP English version					
Positive attitudes (PO +)	121.28	19.89	81–159	0.673	0.699
Negative attitudes (PO-)	62.08	12.37	36–83	0.674	0.689
Total	59.20	14.48	31–85	0.767	0.780
KOP French version					
Positive attitudes (PO +)	113.40	9.69	80–142	0.616	0.623
Negative attitudes (PO-)	60.52	8.40	32–83	0.482	0.495
Total	57.12	8.10	37–89	0.518	0.531
Total scale					
Positive attitudes (PO +)	113.92	10.80	80–159	0.612	0.620
Negative attitudes (PO-)	60.63	8.70	32–83	0.492	0.510
Total	53.29	8.84	31–88	0.557	0.588

Sri Lanka averaged at 136.26 ± 17.468 (Rathnayake et al., 2016), students from China averaged at 121.44 ± 15.80 (Zhang et al., 2016), and students from Italy averaged at 144.3 ± 17.9 (Matarese et al., 2013). In Africa, Malawian students averaged their positive ATOP at 128.2 ± 13.8 (Zverev, 2013) while Egyptian students averaged theirs at 108.71 ± 9 (Eltantawy, 2013). Additionally, almost 75% of the Nigerian students had positive ATOP (Faronbi et al., 2017). Cameroonian students' positive ATOP could be explained by the anecdotal evidence that respect for older adults remains a notable tradition in Cameroon despite socioeconomic and cultural changes due to modernization and urbanization. The older adults remain sources of wisdom and guidance based on their life experiences. Older adults seem to be considered important, strong and wise within families. Extended families help students to be in contact with older adults.

In this study, there was a positive correlation between age and student mean scores. Similarly, Runkawatt, Gustafsson, and Engström (2013) reported more positive ATOP with increasing student age. Conversely, Darling et al. (2017) and Eltantawy (2013) found that younger students had more positive attitudes. However, studies conducted in Turkey showed no significant associations between age and total score (Adibelli, Turkoglu, & Kılıc, 2013; Ayoğlu et al., 2014; Söylemez et al., 2018). In this study, no significant difference between the students' attitudes and gender was shown. This result is consistent with some studies conducted in Turkey, Malawi, Egypt and Sri Lanka (Adibelli et al., 2013; Darling et al., 2017; Eltantawy, 2013; Rathnayake et al., 2016; Söylemez et al., 2018; Zverev, 2013). Conversely, male students from were found to have more positive attitudes than female students who may consider caring for older adults a burden (Ayoğlu et al., 2014), but it did not affect their ATOP. It can thus be concluded that Cameroonian females are likely to fulfill their caring and nurturing roles.

In this study, there was no significant difference between the students' attitudes and year of study. Similarly, student attitudes were unaffected by year of study in Turkey (Ayoğlu et al., 2014; Söylemez et al., 2018), Sweden (Darling et al., 2017), Sri Lanka (Rathnayake et al., 2016), and Malawi (Zverev, 2013). Conversely, first-year nursing students demonstrated more significantly positive attitudes than senior students in Egypt (Eltantawy, 2013). Having lived with an older person did not affect the students' ATOP. Similarly, experiencing living with older adults did not affect Turkish (Ayoğlu et al., 2014; Uğurlu et al., 2011) and Egyptian (Eltantawy, 2013) students' attitudes. Turkish (Söylemez et al., 2018) and Sri Lanka (Rathnayake et al., 2016) students who had been living with older persons had significantly more positive attitudes while Swedish (Darling et al., 2017) students living with older persons had significantly lower positive attitudes than those who did not. However, students who had previously lived with older persons, have more positive attitudes than those who had not. It can be inferred that living with older adults reduces negative stereotypes as a Cameroonian family structure is more extended than nuclear.

No correlation was found between students' ATOP and religion. Similarly, studies conducted in Sri Lanka (Rathnayake et al., 2016) and in Egypt (Eltantawy, 2013) found no correlation. A statistical significance was found in areas where students grew up in Cameroon contrary to Turkey (Söylemez et al., 2018). Students in this study who lived in rural areas had more positive attitudes than those who grew up in an urban area.

Though progression through nursing curricula had little effect on changing nursing students' ATOP, designing experiences to actively engage students' learning gerontological content did (Hovey, Dyck, Reese, & Kim, 2017). Research has proven that training programs alleviate negative ATOP of nursing students (Neville, Dickie, & Goetz, 2013). It is important to develop gerontological nursing curricula to decrease nurses' misconceptions of older adults and improve their ATOP (Y. E. Liu, Norman, & While, 2015). Additionally, nurse educators must understand how to design and deliver gerontological content and clinical experiences to foster positive ATOP (Hovey et al., 2017).

9. Limitations

Self-report nature of information through the questionnaire might be different from real life situations. Therefore, the results of this study can be slightly different from the reality.

10. Conclusion

This study is novel in Cameroon in that, it is the first study to explore nursing students' ATOP. The study reports on slightly positive ATOP. Given that students' attitudes affect communication with older persons, specific training in gerontology curricula should be included to improve positive ATOP. Psychometrics properties of the French version should be sought to determine the correlation in the items of the scale. Qualitative studies should be conducted to investigate the essence of attitudes among students. Researchers should develop scales fitting African cultures. Finally, this study should be replicated on larger samples, with random sampling schemes.

11. Ethical approval details

Approval from the Human and Social Sciences Research Ethics Committee of the University of KwaZulu-Natal (No HSS/2008/017D).

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CRedit authorship contribution statement

Esther Lydie Wanko Keutchafo: Conceptualization, Data curation, Formal analysis, Writing - original draft. Jane Kerr: Conceptualization, Supervision, Writing - review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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The first paper revealed a moderate Cronbach coefficient for both versions of the KOP. With the criticism of the KOP scale related to its outdated language and its ability to really measure attitudes (Ridgway et al., 2018), as well as its context and the revision of a positive or negative value to each item (Runkawatt et al., 2016), it was necessary to examine the psychometric properties of the French version of the KOP scale in the following manuscript.



Psychometric properties of the French version of the Kogan's Attitudes toward Older People scale: A cross-sectional study conducted on Cameroonian nursing students

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ABSTRACT

The Kogan's Attitudes toward Older People (KOP) scale has been used worldwide to explore nursing students' attitudes toward older adults. It has various translations with good psychometric properties. The French version of the scale was first used on a Canadian population in 2012, then on a French Cameroonian population in 2020. However, its psychometric properties, especially its factor structure, have never been determined. To determine the psychometric properties of a French version of the KOP scale on Cameroonian French-speaking nursing students, a cross-sectional study was conducted where a self-administered questionnaire in French was given to a convenience sample of 296 nursing students registered for three different nursing programs. The French version of the KOP scale demonstrated moderate psychometric properties. The internal consistency, indicated by the Cronbach's alpha, was moderate, while the explanatory factor analysis showed two factor loadings, which explained 58.44% of the total variance.

Conclusion: The French version of the KOP scale can be a useful tool for studies in French-speaking African countries to assess the degree of ageism toward older adults. It is suggested that the original KOP scale be retranslated by African translators and administered to larger French-speaking populations in other countries.

KEYWORDS

Attitudes toward older adults; Cameroon; KOP scale; nursing students; French language

Introduction

Worldwide, the demographic trend is an increase in aging populations (United Nations Department of Economic and Social Affairs Population Division, 2019). Older adults in sub-Saharan Africa are rapidly growing compared to any aging population in other regions in the world (Naidoo & Van Wyk, 2019). Although old age is characterized by complex health states, aging is not an illness (Erdemir, Kav, Citak, Hanoglu, & Karahan, 2011). However, older adults tend to have more chronic and complex health-care needs (World Health Organization, 2015) and are likely to use health-care services more frequently than younger people (Kydd, Touhy, Newman, Fagerberg, & Engstrom, 2014). It implies that health-care workers will spend more time with older adults (Flores, 2016), which could be burdensome for health-care workers, and could lead to ageism (Sarabia-Cobo & Pfeiffer,

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2015) and negative attitudes toward older adults. Therefore, possible negative attitudes toward older adults among nursing students should be a concern for nurse educators (Little, 2017). This is because the quality of geriatric nursing care is highly dependent on the preparedness of today's nursing students, who will become tomorrow's geriatric care practitioners (Faronbi, Adebowale, Faronbi, Musa, & Ayamolowo, 2017).

Studies have examined nurses' attitudes toward older adults using different scales with different methodologies, sample sizes, compositions, and settings. The numerous scales used to determine nurses' attitudes toward older adults include the Kogan's Attitudes toward Older People (KOP) scale, the Aging Semantic Differential, the Facts on Aging Quiz, the Aged Inventory, the Perceptions of Working with Older People scale, and the McLafferty scale (Liu, Norman, & While, 2013). Being the first scale to be developed (Urbanová & Bužgová, 2017), the KOP scale by Kogan (1961) has been used to explore health-care workers' attitudes toward older adults, during training, as well as when they are already working in the field (Flores, 2016). Additionally, several studies have indicated that the KOP scale is a reliable and valid instrument for evaluating attitudes toward older adults (Gholamzadeh, Khastavaneh, Khademian, & Ghadakpour, 2018).

The validity and the reliability of the KOP scale have been proven in various languages, such as Turkish (Ayoğlu, Kulakçı, Ayyıldız, Aslan, & Veren, 2014; Erdemir, Kav, Citak, Hanoglu, & Karahan, 2011; Kiliç & Adibelli, 2011; Söylemez, Küçükgülü, Tekin, Ergin, & Yaman, 2018; Turan, Yanardag, & Metintas, 2016; Özer & Terkeş, 2014), Swedish (Darling, Sendir, Atav, & Buyukyilmaz, 2018; Engström & Fagerberg, 2011; Runkawatt, Gustafsson, & Engström, 2013; Söderhamn, Gustavsson, & Lindencrona, 2000), Japanese (Ogiwara, Inoue, & Koshimizu, 2007), Hebrew (Topaz & Doron, 2013; Vitman-Schorr, Iecovich, & Alfasi, 2014), Italian (Matarese, Lommi, Pedone, Alvaro, & De Marinis, 2013), Greek (Lambrinou, Sourtzi, Kalokerinou, & Lemonidou, 2005), Chinese (Yen et al., 2009), Iranian (Rejeh, Heravi-Karimooi, Montazeri, Foroughan, & Vaismoradi, 2012), Arabic (Hweidi & Al-Obeisat, 2005), Thai (Runkawatt et al., 2016), and Persian (Gholamzadeh, Khastavaneh, Khademian, & Ghadakpour, 2018). Only one record of a French version was found, in Canada, where nurses' attitudes toward older adults were examined in an experimental and a control group for a PhD thesis (Dubé, 2012). However, an exploratory factor analysis (EFA) was not done to describe the factor structure of the version.

Before 2020 in Africa, there were only four studies recorded on nurses' attitudes toward older adults, while numerous studies on attitudes toward older adults have been recorded in other countries. One was conducted in Nigeria in 2012, with a questionnaire adapted from three different scales, including the English version of the KOP scale (Faronbi, Adebowale, Faronbi, Musa, & Ayamolowo, 2017). Another was also conducted in Nigeria, through a 30-item questionnaire developed from an extensive literature review (Oyetunde, Ojo, & Ojewale, 2013). The third was conducted in Egypt and used four different scales, including an Arabic version of the KOP scale (Eltantawy, 2013). The last was conducted in Malawi and used the English version of the KOP scale among medical and nursing students (Zverev, 2013). All the countries mentioned are English-speaking countries in western, southern, and northern Africa. In 2020, for the first time, a study was conducted in a French-speaking African country, namely Cameroon, using the French and English versions of the KOP scale (Keutchafo & Kerr, 2020). Cameroon is a lower-to-middle-income country located in Central Africa. Although it has more than 230 ethnic groups, French and English are the two official languages, with French being the most commonly spoken language (Kelodjoue,

Libité, & Jazet, 2012). French is spoken in 29 out of 56 African countries. It is worth noting that there are no differences between the French spoken in Canada and the French spoken in Africa in terms of grammar. The difference comes with the settings that are different and that can influence the meaning of the questions in the scale. Yet, the original version of the KOP scale contains some aspects of the American context in 1961 that seem not to be generalized to some African contexts. Additionally, American and Canadian societal values and cultural beliefs may differ from Cameroonian values. Therefore, this paper aims at exploring the properties of a French version of the KOP scale, translated in Canada, on a French-speaking Cameroonian nursing student population.

Method

A cross-sectional study was conducted to assess French-speaking, Cameroonian nursing students' attitudes toward older adults. The purpose of this paper is to determine the psychometric properties of the French version of the KOP scale among Cameroonian nursing students.

Settings and participants

The study included two purposively sampled nursing schools. The first school operates a two-year geriatric nursing program for registered nurses. The second school offers nursing programs from a three-year diploma program to a PhD program. After permission was gained from the two schools to conduct the study, the study was approved by the Human and Social Sciences Research Ethics Committee of the University of KwaZulu-Natal (reference number HSS/2008/017D). A convenience sample of respondents was selected, and it included 296 students from both schools. Students were selected if they were proficient in French, registered as students, and present at school on the days of data collection.

The questionnaire

The questionnaire was comprised of two sections. The first related to the sociodemographic characteristics of the respondents and included age, gender, year of study, the area where they grew up, if they have lived with an older person or not, and if they have been taught nonverbal communication with patients or not. All these variables were chosen because they were correlated with attitudes toward older adults in other studies. The second section was the French version of the KOP scale. The KOP scale includes 17 pairs of statements, 17 positive and 17 negative statements randomly ordered in the questionnaire. The scale uses a six-point Likert scale, with response options on both the positive and the negative statements ranging from "strongly agree" (6) to "strongly disagree" (1) (Vitman-Schorr, Iecovich, & Alfasi, 2014). The French version used for this study was first translated and used in Canada, in 2012. For the current study, a pilot study was conducted on 20 French-speaking students, different from the study population but with similar characteristics, to ascertain the reliability of the instrument. A Cronbach's alpha score of 0.63 was obtained, and the scale was thus deemed acceptable for use in this current study.

Data collection

Recruitment of respondents occurred in the classrooms in both schools on different days and times. The researcher and the program coordinators checked the week's schedule and the best time for data collection. The researcher was introduced to the respondents, on the days of data collection by the program coordinators. Nurse educators facilitating each class were approached and asked for permission to talk to the students. The researcher explained the study in French and invited questions. Students were told that they could withdraw from the study or refuse to participate without any harm to themselves. Students were then asked to raise their hands if they spoke French and were willing to participate in the study. Those who agreed were provided with an information letter and a consent form in French. Two research assistants helped distribute the French questionnaires, which were completed on-site, placed in a box with the consent forms, and returned at the end of the lecture on the day of data collection. A total of 376 questionnaires were distributed, and only 296 were returned. Confidentiality was maintained throughout the study. Data were collected in April 2018.

Data analysis

Data were analyzed using the software package, the Statistical Package for the Social Sciences (SPSS), version 27. Descriptive statistics were performed to describe the socio-demographic characteristics of each of the respondents. To determine if our sample was appropriate for factor analysis, we used two indexes: a Bartlett's test of sphericity supplemented with a measure of sampling adequacy (KMO). A Bartlett's test of sphericity examines the hypothesis that the variables are uncorrelated with the population. It should produce a statistically significant chi-square value (.000). A KMO >0.5 to justify the application of EFA (Watkins, 2018). Content validity was established through an EFA (Explanatory Factor Analysis) based on the principal component analysis (PCA) method with varimax rotation. The PCA method, which analyzes the entire correlation matrix and reduces data while preserving as much information from the original data set as possible, extracted the maximum variance and put it into the first factor, then removed that variance and extracted the maximum variance for the second to the last factor. The varimax rotation, designed to achieve a simpler and theoretically more meaningful solution by rotating the axes within factor space to bring them closer to the location of the variables (Watkins, 2018), minimized the number of variables that have high loadings on a factor to produce a relatively simple structure, then rotated the axes within factor space at 90 degrees to bring them closer to the location of the variables. Eigenvalues >1 as well as factor loading cut offs $>.4$ were used to create factors. An EFA was conducted instead of a confirmatory factor analysis (CFA) because there is no record of an EFA conducted for the original French version of the scale. Therefore, it is not possible to test the consistency of the factor structure with the original French version or to determine how well the theoretical model of factor loadings fits the actual data. The reliability of the study was ascertained through a Cronbach's alpha coefficient. Also, correlation coefficients between each item and the total scale and the effects of deleting items for the Cronbach's alpha values were determined. A p-value lower than 0.05 was considered significant.

Results

Descriptive statistics

The sociodemographic characteristics of the respondents for each nursing program are presented in Table 1. The results show that, out of the 296 nursing students, 75% were female and 25% were male. With regards to age, 42.2% were aged 20–24 years, 27.4 were aged 25–29 years, 20.9 were aged 30 years and over, and 9.5% were less than 20 years. The majority of students have lived with an old person before (81.1%), grew up in an urban area (73.3%), were Christian (94.3%), and were not told nonverbal communication (71.6%). Furthermore, 29% were studying toward a diploma in nursing, 67.23% toward a degree in nursing, and 3.72% toward a specialization in gerontological nursing.

Moreover, the results show that the respondents did not differ significantly based on their gender and their religion and whether they had ever lived with an old person. However, they differed based on their age, with more students aged 20–24 years participating in the study compared to students from other age groups. The respondents also differed based on the area where they grew up, with more students, who grew up in urban areas, participating in the study compared to those who grew up in rural areas. The respondents also differed based on whether they had previously completed a course in nonverbal communication, with more students who had not been taught nonverbal communication participating in the study compared to those who had been taught nonverbal communication. All the above differences were statistically significant.

Table 1. Sociodemographic characteristics of the participants (N = 296).

Demographics	Diploma program N(%)	Degree program N(%)	Geriatric program N(%)	Total N(%)
Age of the respondents				
<20 years	9(3.04)	19(6.42)	0(0.0)	28(9.46)
20–24 years	39(13.18)	85(28.72)	1(0.34)	125(42.24)
25–29 years	29(9.79)	51(17.23)	1(0.34)	81(27.36)
30+ years	9(3.04)	44(14.86)	9(3.04)	62(20.94)
Total	86(29.05)	199(67.23)	11(3.72)	296(100.00)
Gender of the respondents				
Female	59(19.93)	154(52.03)	9(3.04)	222(75.00)
Male	27(9.12)	45(15.20)	2(0.68)	74(25.00)
Total	86(29.05)	199(67.23)	11(3.72)	296(100.00)
Lived with an old person before?				
Yes	65(21.96)	164(55.41)	11(3.72)	240(81.09)
No	21(7.09)	35(11.82)	0(0.0)	56(18.91)
Total	86(29.05)	199(67.23)	11(3.72)	296(100.00)
Area where they grew up				
Rural	19(6.42)	48(16.22)	3(1.01)	70(23.65)
Urban	64(21.62)	147(49.66)	6(2.03)	217(73.31)
Both	3(1.01)	4(1.35)	2(0.68)	9(3.04)
Total	86(29.05)	199(67.23)	11(3.72)	296(100.00)
Religion				
Christian	77(26.01)	191(64.53)	11(3.72)	279(94.26)
Muslim	7(2.36)	4(1.35)	0(0.0)	11(3.71)
African	2(0.68)	4(1.35)	0(0.0)	6(2.03)
Total	86(29.05)	199(67.23)	11(3.72)	296(100.00)
Been taught nonverbal communication?				
Yes	20(6.76)	54(18.24)	10(3.38)	84(28.38)
No	66(22.29)	145(48.99)	1(0.34)	212(71.62)
Total	86(29.05)	199(67.23)	11(3.72)	296(100.00)

Table 2. Respondents' attitudes across demographics.

	Respondents' negative attitudes towards old people		Respondents' positive attitudes towards old people		Respondents' overall attitudes towards old people	
	Mean	SD	Mean	SD	Mean	SD
Age						
<20 years	66.75	9.84	59.32	10.32	126.07	18.22
20–24 years	66.89	8.13	60.58	8.36	127.46	13.60
25–29 years	65.85	7.18	58.78	8.31	124.63	11.73
30+ years	65.00	8.36	62.48	7.51	127.48	13.02
	F = 0.845, p = .470		F = 2.461, p = .063		F = 0.847, p = .469	
Gender						
Male	66.65	7.44	60.73	8.99	127.38	12.70
Female	66.04	8.32	60.24	8.27	126.29	13.77
	t = .554, p = .580		t = .429, p = .668		t = .601, p = .548	
Nursing program						
Degree	65.91	8.16	59.85	8.32	125.76	13.30
Diploma	66.53	8.09	61.24	8.89	127.78	14.30
Geriatric	68.73	7.14	62.73	6.48	131.45	9.08
	F = .735, p = .480		F = 1.263, p = .284		F = 1.425, p = .242	
Lived with an old person before?						
Yes	66.44	8.33	60.79	8.17	127.33	13.46
No	65.14	6.99	58.53	9.37	123.68	13.39
	t = 1.081, p = .281		t = 1.807, p = .072		t = 1.781, p = .076	
Area where respondents grew up						
Rural	68.37	9.15	61.71	8.26	130.08	14.58
Urban	65.88	7.64	59.94	8.50	125.52	13.02
Both	64.11	7.99	60.00	8.21	124.11	12.78
	t = 3.506, p = .031		t = 1.173, p = .311		t = 3.222, p = .041*	
Religion						
Christian	66.35	8.03	60.50	8.14	126.85	13.03
Muslim	63.36	8.92	58.73	11.54	122.09	18.63
African	64.33	10.07	56.83	15.20	121.17	23.02
	F = .879, p = .416		F = .769, p = .464		F = 1.149, p = .318	
Been taught on nonverbal communication with patients?						
Yes	67.34	7.57	62.24	7.72	129.58	12.01
No	65.74	8.27	59.62	8.62	125.36	13.89
	t = 1.540, p = .125		t = 2.423, p = .016		t = 2.446, p = .015*	

*Statistically significant ($p < .05$).

The associations between all the sociodemographic characteristics and attitudes toward older adults were not significant for most of the characteristics (see Table 2). However, there were significant differences based on where they grew up. Students who grew up in rural areas had more positive attitudes toward older adults than those who grew up in urban areas. Students who had been taught nonverbal communication had more positive attitudes toward older adults than those who had not been taught nonverbal communication with older adults.

Factor analysis

To detect the factor structure of the KOP scale, an EFA based on the principal component analysis method with varimax rotation was conducted. The Bartlett's test of sphericity was highly significant ($\chi^2 = 124.44$, $df = 10$, $p < .05$), showing that the variables were correlated, and the data was ideal for factor analysis (George and Mallery, 2003). The Kaiser –

Table 3. Descriptive statistics.

	Mean	SD	Skewness	Kurtosis
N17: Most old people make excessive demands for love and reassurance	2.72	1.574	.533	-.869
P17: Most old people need no more love and reassurance than anyone else	4.22	1.422	-.813	-.133
N11: If old people expect to be liked, their first step is to try to get rid of their irritating faults	4.16	1.363	-.644	-.411
P11: When you think about it, old people have the same faults as anybody else	3.26	1.672	.188	-1.235
N13: There are a few exceptions, but in general, most old people are pretty much alike	4.00	1.628	-.418	-1.015
P13: It is evident that most old people are very different from one another	3.69	1.473	-.157	-1.040
P12: You can count on finding a nice residential neighborhood when there is a sizable number of old people living in it	3.27	1.618	.253	-1.166
N12: In order to maintain a nice residential neighborhood, it would be best if too many old people did not live in it	4.43	1.550	-.923	-.249
N3: Most old people get set in their ways and are unable to change	2.95	1.530	.389	-.979
P3: Most old people are capable of new adjustments when the situation demands it	3.46	1.659	-.134	-1.218
P1: It would probably be better if most old people lived in residential units that also housed younger people	2.98	1.722	.359	-1.252
N1: It would probably be better if most old people lived in residential units with people of their own age	4.41	1.468	-.843	-.153
N7: Old people should have more power in business and politics	3.73	1.552	-.187	-1.110
P7: Old people have too much power in business and politics	3.00	1.447	.378	-.822
N5: Most old people tend to let their homes become shabby and unattractive	3.11	1.493	.128	-.971
P5: Most old people can generally be counted on to maintain a clean, attractive home	4.27	1.369	-.815	-.137
P14: Most old people seem to be quite clean and neat in their personal appearance	3.33	1.586	.152	-1.167
N14: Most old people should be more concerned with their personal appearance: they are too untidy	5.18	1.061	-1.861	3.963
N10: Old people spend too much time prying into the affairs of others and giving unsought advice	4.30	1.390	-.695	-.302
P10: Most old people tend to keep to themselves and give advice only when asked	3.69	1.528	-.171	-1.017
N15: Most old people are irritable, grouchy, and unpleasant	3.40	1.432	-.077	-.945
P15: Most old people are cheerful, agreeable, and good humored	4.09	1.557	-.641	-.630
N2: There is something different about most old people: it is hard to figure out what makes them tick	2.81	1.570	.480	-.893
P2: Most old people are really no different from anybody else: they're as easy to understand as younger people	3.65	1.444	-.150	-.937
P8: Most old people are very relaxing to be with	4.45	1.201	-.917	.585
N8: Most old people make one feel ill at ease	3.96	1.418	-.387	-.747
P6: People grow wiser with the coming of old age	3.95	1.435	-.513	-.572
N6: It is foolish to claim that wisdom comes with old age	3.63	1.347	-.187	-.710
P4: Most old people would prefer to continue working just as long as they possibly can rather than be dependent on anybody	3.41	1.466	-.005	-.907
N4: Most old people would prefer to quit work as soon as pensions or their children can support them	4.29	1.191	-.607	.171
N9: Most old people bore others by their insistence on talking about the "good old days"	5.09	1.098	-1.598	2.640
P9: One of the most interesting and entertaining qualities of most old people is their accounts of their past experiences	2.37	1.513	1.062	.073
N16: Most old people are constantly complaining about the behavior of the younger generation	4.03	1.365	-.472	-.633
P16: One seldom hears old people complaining about the behavior of the younger generation	3.26	1.556	.098	-1.161

Meyer-Olkin (KMO) measure of sampling adequacy value was moderate (0.638), but suitable for factor analysis (Williams, Onsmann, & Brown, 2010). The 34 items of the KOP scale were measured by means, standard deviation, skewness, and kurtosis (Table 3). The means ranged from 2.37 to 5.18, with a standard deviation from 1.061 to 1.722. The skewness ranged from -1.861 to 1.062, and the Kurtosis ranged from -1.252 to 3.963. As described by Hair, Black, Babin, & Anderson (2010) and Byrne (2010), data is considered normal and acceptable for factor analysis if Skewness ranges between -2 to 2, and Kurtosis between -7 to 7, which was the case in our study.

Table 4. Factor loadings of the French version of the KOP scale by EFA.

	Prejudice	Appreciation
Most old people tend to let their homes become shabby and unattractive	.49	
Old people should have more power in business and politics	.66	
Most old people make one feel ill at ease	.53	
Most old people bore others by their insistence on talking about the "good old days"	.51	
Old people spend too much time prying into the affairs of others and giving unsought advice	.54	
If old people expect to be liked, their first step is to try to get rid of their irritating faults	.59	
In order to maintain a nice residential neighbourhood, it would be best if too many old people did not live in it	.51	
There are a few exceptions, but in general, most old people are pretty much alike	.49	
Most old people should be more concerned with their personal appearance: they are too untidy	.54	
Most old people are irritable, grouchy, and unpleasant	.47	
Most old people are constantly complaining about the behaviour of the younger generation	.52	
Most old people make excessive demands for love and reassurance	.51	
Most old people are really no different from anybody else: they're as easy to understand as younger people		.60
Most old people are capable of new adjustments when the situation demands it		.58
Most old people can generally be counted on to maintain a clean, attractive home		.53
Most old people are very relaxing to be with		.56
Most old people tend to keep to themselves and give advice only when asked		.65
You can count on finding a nice residential neighbourhood when there is a sizeable number of people living in it		.65
Most old people seem to be quite clean and neat in their personal appearance		.52
Most old people are cheerful, agreeable, and good humoured		.61
One seldom hears old people complaining about the behaviour of the younger generation		.62
Most old people need no more love and reassurance than anyone else		.45

The factor loadings of the two factors are shown in Table 4. According to the principal component analysis, the factor "prejudice" included 12 items and accounted for 36.33% of the total variance in the matrix. The eigenvalue, which represents the amount of variance each factor accounts for, was 1.81. The factor "appreciation" included ten items and accounted for 22.11% of the total variance; the eigenvalue was 1.10. Both factors explained more than 58.44% of the total variance, which means that a strong relationship exists between the variables under study. None of the items had a coefficient <0.4 , meaning that we did not suppress any item. However, items P17, N5, N15, and N13 had loadings of less than .5. Finally, only one demographic characteristic was significantly associated with the two factors, as shown in Table 5. The two factors were weakly correlated (coefficient $< .30$) as shown in Table 6.

Reliability analysis

The reliability of the French version of the KOP scale showed a Cronbach's alpha of .62 for the overall scale. The results show that the items were significantly slightly to fairly intercorrelated with items N17, P1, N7, and P16, as their values were low. Furthermore, the alpha of the item deleted shows that the internal consistency was .60–.62, and that the item had a significant effect on the overall reliability score.

Discussion

The purpose of this article is to determine the psychometric properties of the French version of the KOP scale on Cameroonian nursing students. The findings show that the students

Table 5. Factors across demographics.

	Factor 1: prejudice		Factor 2: appreciation	
	Mean	SD	Mean	SD
Age				
<20 years	45.71	7.34	37.25	7.81
20–24 years	45.30	5.97	38.01	5.61
25–29 years	44.51	5.19	36.62	5.98
30+ years	43.37	6.52	38.71	4.89
	F = 1.702; p = .167		F = 1.738; p = .159	
Gender				
Male	44.72	6.26	37.35	6.07
Female	44.72	6.00	37.82	5.76
	t = .000; p = 1.000		t = -.063; p = .547	
Nursing program				
Degree	44.70	6.02	37.48	5.80
Diploma	44.46	6.11	37.99	6.12
Geriatric	47.00	6.21	39.54	3.93
	F = .857; p = .425		F = .792; p = .454	
Lived with an old person before?				
Yes	44.90	6.18	37.96	5.79
No	43.91	5.43	36.61	5.95
	t = 1.107; p = .269		t = 1.568; p = .118	
Area where respondents grew up				
Rural	46.00	6.63	38.20	5.85
Urban	44.32	5.82	37.55	5.89
Both	44.22	5.99	37.55	4.80
	F = 2.079; p = .127		F = .327; p = .722	
Religion				
Christian	44.85	5.96	37.79	5.60
Muslim	42.54	7.12	37.10	7.42
African	42.50	8.02	34.67	12.09
	F = 1.179; p = .309		F = .907; p = .405	
Been taught on nonverbal communication with patients?				
Yes	45.84	5.73	38.78	5.44
No	44.27	6.13	37.28	5.94
	t = 2.031; p = .043*		t = 2.013; p = .045*	

Table 6. Correlation matrix of the factors.

	Prejudice	Appreciation
Prejudice	1	.250
Appreciation	.250	1

had positive attitudes toward older adults. Likewise, African nursing students from Malawi (Zverev, 2013), Egypt (Eltantawy, 2013), and Nigeria (Faronbi, Adebawale, Faronbi, Musa, & Ayamolowo, 2017) had positive attitudes toward older adults. The anecdotal evidence that respect for older adults remains a notable tradition in Cameroon could explain the positive attitudes toward older adults. As in Eastern countries, respect for older adults is a cultural value (Gholamzadeh, Khastavaneh, Khademian, & Ghadakpour, 2018), and the values and beliefs of filial piety are still rooted in people's habits, to the point that taking care of, respecting, and obeying older relatives are duties among the children (Chi, Shyu, Wang, Chuang, & Chuang, 2016). The results show that students' attitudes only differed by whether they had been taught nonverbal communication, which shows that more positive

attitudes are associated with education. This is consistent with Rejeh, Heravi-Karimooi, Montazeri, Foroughan, and Vaismoradi (2012) who found that experienced nurses with more knowledge and educational experiences of caring for older adults reported more positive attitudes. Likewise, research has shown that geriatric nursing training programs mitigated nursing students' negative attitudes toward older adults (Neville & Dickie, 2014), while an empathy skills training program had a significant impact on attitudes toward older adults (Gholamzadeh, Khastavaneh, Khademian, & Ghadakpour, 2018). In a review of students' engagement with gerontological content, it was shown to improve attitudes toward older adults (Hovey, Dyck, Reese, & Kim, 2017), while highly positive attitudes toward older adults, demonstrated by clinical instructors, encouraged students' positive attitudes toward older adults (Gibbs & Kulig, 2017).

The total Cronbach's alpha coefficient was moderate, as in the studies conducted with a Thai version (Runkawatt et al., 2016), a Swedish version (Söderhamn, Gustavsson, & Lindencrona, 2000), and an Irish version (Doherty, Mitchell, & O'Neill, 2011). However, high coefficients were found in studies conducted with a Greek version (Lambrinou, Sourtzi, Kalokerinou, & Lemonidou, 2005), Turkish versions (Darling, Sendir, Atav, & Buyukyilmaz, 2018; Erdemir, Kav, Citak, Hanoglu, & Karahan, 2011; Kiliç & Adibelli, 2011; Küçükgüçlü et al., 2011), a Chinese version (Wang et al., 2009), and a Japanese version (Ogiwara, Inoue, & Koshimizu, 2007). The finding of a moderate Cronbach's alpha coefficient in this study could be because the KOP tool was originally created in the USA, where societal values and cultural beliefs may differ from those in Cameroon. This suggests the need to develop tools that are contextualized for the African continent.

The Kaiser – Meyer–Olkin coefficient was found to be moderate, the Bartlett's test of sphericity was significant, and 58.44% of the total variance was explained by only two factors. Similarly, the Chinese (Liu, Norman, & While, 2015; Wang et al., 2010; Yen et al., 2009), the Italian (Matarese, Lommi, Pedone, Alvaro, & De Marinis, 2013), the Iranian (Rejeh, Heravi-Karimooi, Montazeri, Foroughan, & Vaismoradi, 2012), the Turkish (Erdemir, Kav, Citak, Hanoglu, & Karahan, 2011) and the Japanese (Ogiwara, Inoue, & Koshimizu, 2007) versions extracted two factor loadings. By contrast, the Hebrew version contained five factors (Vitman-Schorr, Iecovich, & Alfasi, 2014), the Greek version contained six factors (Lambrinou, Sourtzi, Kalokerinou, & Lemonidou, 2005), and the Swedish version contained three factors (Söderhamn, Gustavsson, & Lindencrona, 2000). These differences might be due to the sizes and the nature of the samples. Therefore, there is a need for further investigations to gain a better understanding.

The factor analysis showed a strong relationship between the two factors. The factors yielded included "appreciation," linked to positive feelings and opinions toward older adults, and "prejudice," with items that express negative feelings and opinions toward older adults. This is consistent with Fiske, Cuddy, Glick, and Xu (2002), who revealed that there are generally mixed perceptions, thus mixed attitudes, toward older adults. The factor "appreciation" shows that Cameroonian students appreciate older adults and see them as important, strong, and wise, and not different from the younger population. This contradicts the view that older adults are either isolated or excluded in African societies (Pillay & Maharaj, 2013). Like the Hebrew (Vitman-Schorr, Iecovich, & Alfasi, 2014), the Iranian (Rejeh, Heravi-Karimooi, Montazeri, Foroughan, & Vaismoradi, 2012) and the Greek (Lambrinou, Sourtzi, Kalokerinou, & Lemonidou, 2005) versions of the scale which yielded two factors, it seems that the study population appreciates values differently from

populations in other countries. Furthermore, it must be considered that, despite the socioeconomic and cultural changes in African countries, respect for older adults is still a notable tradition in Cameroonian society. Conversely, negative attitudes toward older adults could be explained by stereotypes about old people and past experiences with elders. There is a need to improve students' attitudes toward older adults. Further research should examine the reliability and the validity of the KOP scale on the major ethnic groups in Cameroon, and should examine the associations and the differences between ethnic backgrounds.

Three items were found to have low correlations with the item-total correlations on the French version of the scale. These low correlations need further investigation, but they can be explained by the fact that the French version does not completely reflect the Cameroonian context. For instance, the French translation of "residential units," namely "*quartiers résidentiels*," has a different meaning in Cameroon from what it has in Canada. "*Quartiers résidentiels*" in Cameroon refers more to a neighborhood where rich people live in their own houses irrespective of their age, while in Canada it refers to long-term care settings, which are still non-existent in the public health-care sector in Cameroon (World Health Organization, 2017).

Limitations

Self-report of information through the questionnaire is seen as one of the limitations of this study, because the questionnaire might be different from the real-life situation. Another limitation relates to generalization of the findings, due to the sample size and the sampling procedure, which did not guarantee the representativeness of the nursing students in Cameroon. The study should have included a randomly selected sample and a larger size. Further, the small sample size in the geriatric program did not give a true picture of geriatric nursing compared to general nursing. Although the findings show fair psychometric qualities with the French version of the KOP scale, there is a need to revise the French version for better psychometric qualities. Finally, the items related to older people's homes in the KOP scale could have been quite confusing as people live with their older relatives in African cultures in comparison to western societies.

Recommendations

This paper shows that tools should be context-dependent to be accurate. These results challenge African researchers to develop and test tools that reflect African realities. As French is most widely spoken in Africa (29 countries out of 56), African translators should reexamine the French version of the KOP scale and should propose changes without distorting the content of the scale. This is consistent with Runkawatt et al. (2016) who conducted a similar study in Taiwan, Indonesia and Myanmar with a Thai version of the KOP scale and recommended that researchers from countries other than America should consider a revision of the instrument. Because an EFA does not specify which items load on which factors, a CFA is recommended to eliminate items or change the structure of the scale if need be. Researchers are also encouraged to use the French version of the scale in other French-speaking African countries. Finally, researchers are

encouraged to conduct the study with the French version of the KOP scale on a sample size larger than 340.

Conclusion

The results of this study show moderate properties of the French version of the KOP scale. Considering that there is a call for more data on older adults from African countries, the properties of the scale should be improved, so that the French version is used in all 29 French-speaking African countries. Adopting more positive attitudes toward older adults will lead to more and higher-quality care being provided for older adults in sub-Saharan Africa, where the older population is the second-fastest-growing older population in the world.

Author contribution

Study conception and design: Esther WANKO and Jane KERR

Data collection: Esther WANKO

Data analysis and interpretation: Esther WANKO

Drafting of the article: Esther WANKO

Critical revision of the article: Jane KERR

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5.4 Conclusion

The results in this chapter showed slightly positive attitudes of nursing students' towards older adults. Negative attitudes towards older adults in hospitals can impair the quality of care (Van Wicklin, 2020); therefore, more knowledge is needed on how to adequately prepare student nurses for good communication with hospitalised older adults. Because the current research focused on attitudes measurement at a point in time, it is hoped that attitudes towards older adults will be improved with the aid of tools such as the proposed model for nonverbal communication described in the next chapter where participants mentioned attitudes towards older adults as an influencing factor of effective nonverbal communication.

CHAPTER SIX: MODEL OF EFFECTIVE NONVERBAL COMMUNICATION BETWEEN NURSES AND HOSPITALISED OLDER ADULTS

6.1 Introduction

This chapter addresses the last objective of this study. It is comprised of two published articles. The first manuscript focused on factors that influence effective nonverbal communication as intervening conditions. This was because assessing factors that could affect communication is always crucial for effective communication (Webb, 2018). The second paper described the model for effective nonverbal communication with older adults, which encompasses the six categories described in Strauss and Corbin's (2008) framework of data analysis.

Conditions Influencing Effective Nurse Nonverbal Communication With Hospitalized Older Adults in Cameroon

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Abstract

Effective communication between nurses and patients is an important factor to quality nursing care but ineffective nonverbal communication could take a toll on health care. Therefore, understanding the factors that influence nonverbal communication between nurses and hospitalized older adults could help solve communication problems, thus improve nursing care. A sample of 13 nurses and 4 student nurses from two hospitals in Cameroon participated in the study. Data were collected using participant observations and semi-structured interviews, and analyzed using open coding and constant comparative analysis. Three categories were identified as influencing factors: nurse views of hospitalized older adults, hospitalized older adult-related factors, and nurse intrinsic factors. Effective nurses' nonverbal communication with hospitalized older adults relies mostly on nurses' intrinsic factors. Identification and nurturing of the positive nurse intrinsic factors are important to develop effective nonverbal communication skills among nurses.

Keywords

nurse nonverbal communication, hospitalized older adults, influencing factors, Cameroon, aging, nurse-patient

Résumé

La communication efficace entre les infirmières et les patients est un facteur important pour des soins infirmiers de qualité, mais une communication non verbale inefficace pourrait nuire aux soins de santé. Par conséquent, comprendre les facteurs qui influencent la communication non verbale entre les infirmières et les personnes âgées hospitalisées pourrait aider à résoudre les problèmes de communication et ainsi améliorer les soins infirmiers. Un échantillon de 13 infirmières et 4 élèves infirmières de deux hôpitaux du Cameroun ont participé à l'étude. Les données ont été recueillies à l'aide d'observations des participants et d'entrevues semi-structurées, et analysées à l'aide d'un codage ouvert et d'une analyse comparative constante. Trois catégories ont été identifiées comme facteurs influençant la communication non verbale des infirmiers avec les personnes âgées hospitalisées : les points de vue des infirmiers sur les personnes âgées hospitalisées, les facteurs liés aux personnes âgées hospitalisées et les facteurs liés aux infirmiers. La communication non verbale efficace des infirmiers avec les personnes âgées hospitalisées repose principalement sur les facteurs propres aux infirmiers. L'identification et le développement des facteurs positifs liés aux infirmiers sont importants pour développer des compétences de communication non verbale efficaces chez les infirmiers.

Mots clés

Communication, Communication non verbale infirmière, Personnes âgées hospitalisées, Facteurs d'influence, Cameroun

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Introduction

Older adults make up a significant proportion of the population worldwide (Mohseni et al., 2019). Older adults accounted for 1 billion people, with 32 million in sub-Saharan Africa in 2019, which is projected to reach 101 million by 2050, an increase of 218% (United Nations Department of Economic

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and Social Affairs Population Division, 2019). This makes the older adult population in sub-Saharan Africa the second most rapidly growing population of all regions globally (Naidoo & Van Wyk, 2019). This rapid growth implies that there will be increased needs for geriatric healthcare services (Hammar et al., 2017; Kydd et al., 2014), and that nurses will be expected to care for older adults more than any other patient (Gallo, 2019). Yet hospitalized older adults are not a homogeneous group, as they have a wide range of experiences that influence their perceptions (Jack et al., 2021) and their interpretation of nurse nonverbal communication (Keutchafo et al., 2020). Also, older adults may experience hearing deficits, changes in attention and coding of the information, which may restrict their interaction, participation, and effective communication (Forsgren et al., 2016; Sanecka, 2014). This also indicates that effective communication with older adults will be an essential nursing skill (Skoglund et al., 2018).

Communication is the cornerstone of every human society, which sustains social life (Ahmadi & Kiani, 2019). In healthcare settings, effective communication is the basis of any relationship, especially of nurse-patient relationships (Windover et al., 2014). In geriatric care, communication is important to understand older adults' needs and to support their health and well-being (Hafskjold et al., 2015). Communication, which includes verbal and nonverbal components, is more complicated than the mere transmission of information (de Guzman et al., 2019; Zani et al., 2014). The nonverbal aspect of communication is defined as "behavior of the face, body, or voice minus the linguistic content"; "everything but the words" (Hall et al., 2019, p. 272). It also includes how we behave, how we sound, and what is expressed between each other (Blanch-Hartigan et al., 2018). Nonverbal communication has different modalities, which include haptics (the use of touch), artifacts (the presence of physical and environmental objects), proxemics (the use of space and distance), chronemics (the use and perception of time), kinesics (forms of movement of the body), physical appearance (body type and clothing), silences, and vocalics (aspects of the voice; Boggs, 2015; Stanyon et al., 2016).

Factors found to influence effective communication between nurses and patients have been described as nurse related, patient related, environmental, physical, and psychological factors. Authors have identified nurse related factors as job dissatisfaction, workload, insufficient time. Uncontrolled patient family presence is a patient-related factor, and a busy environment is an environment-related factor (Amoah et al., 2019; Andriyanto, 2019; Loghmani et al., 2014; Tay et al., 2011). Physical factors are identified as room sizes/space, shortage of nurses, ambient noise, lack of privacy, and time constraints. Psychological factors like personality traits, anxiety, level of self-esteem, and psychological disorders, and culture, rules, rituals, laws, religion are described as social factors (Al-Kalaldehy et al., 2020; Arungwa, 2014; Coleman & Angosta, 2017; Hemsley et al., 2012; Savio & George, 2013). When communication is effective, patients feel cared for, respected, and more able to describe their concerns (Jack

et al., 2021). On the other hand, patients' negative experiences in their interactions with nurses would inevitably shape their subsequent communication with them, and patients would be less motivated to disclose their needs and feelings to nurses (Chan et al., 2018).

Ageist attitudes have been recognized as a factor influencing older adults (World Health Organization [WHO], 2021). Ageism comprises discrimination, prejudice, and stereotypes toward a person based on their age (Ayalon et al., 2019). Ageist attitudes and biases can lead to age-based disparities in healthcare including diagnostic procedures, decision making, and types of treatment offered. In addition, ageist attitudes are reflected in interpersonal interactions that are patronizing or involve "elder speak" (Wyman et al., 2018). Ageism in healthcare limits older adults' access to appropriate and respectful care, and results in adverse clinical outcomes (Inouye, 2021). Communication that is free of age-related bias is essential to high quality, patient-centered care.

Effective communication with hospitalized older adults is an important part of nursing care and can present unique challenges. Although the importance of communication in healthcare has long been recognized (Chan et al., 2019), special attention needs to be directed to nonverbal communication. Words express only a part of the message being communicated, with the rest of the message conveyed by gestures, tone, and attitude (Lambrini & Loanna, 2014). Additionally, factors affecting nonverbal communication between nurses and patients should be recognized and considered so that the effectiveness of nurse communication can be enhanced and the quality of care improved (Tran et al., 2020; Yazew et al., 2021). This research aimed to describe conditions that influence effective nurse nonverbal communication with hospitalized older adults in Cameroon.

Methods

A qualitative design was used in this study. Although guided by inductive approaches reflected in grounded theory methods (Strauss & Corbin, 2015), our aim was not to develop theory. Rather, we used some grounded theory data collection and analysis techniques to develop an interpretive understanding of the largely unexplored topic of nurse nonverbal communication with hospitalized older adults in Cameroon.

Study Settings and Context

The study was conducted in two public hospitals in the East Region and the Central Region of Cameroon because older adults receive healthcare in hospital settings. There is no national effort to develop long-term care settings in the country yet (WHO, 2017b). Both hospitals are part of the central level of the three-level pyramidal Cameroonian healthcare system and serve as referral and teaching hospitals. Although one hospital has a geriatric unit, in both hospitals, older adults are admitted, mixed with younger adults but categorized based on their illness. The nurses who worked in these

hospitals are certified nurses, registered with the nursing council or not because registration is not compulsory for practice in Cameroon. Diploma nurses study for 3 years in a nursing college after a high school certificate. Degree certified nurses study 3 or 4 years in a university after a high school certificate. Nursing assistants study for 18 months after the O level certificate is obtained in high school. Yet they constitute a portion of the healthcare workers as they are often team leaders and unit managers over diploma and degree nurses. Additionally, geriatric specialized nurses undergo a 2-year program in gerontological nursing and obtain their certificate without an accredited exam. In this study, the United Nations cut-off of 60 years and older referring to the older adult population in Africa was considered. While most high-income countries have accepted the chronological age of 65 years and older, the age of retirement, as a definition of an older adult (Zverev, 2013), socio-economic and disease reasons suggest that 65 years is not readily applicable to the African context (WHO, 2016).

Study Participants and Sampling

Ten nurses, including five nurses in each hospital, were recruited to participate in the study for overt participant observation, using a purposive, open sampling approach (Corbin & Strauss, 2015). These were nurses with any nursing experience, who could articulate in English or French, were involved in the day-to-day care of older adults admitted in the hospital, and demonstrated a willingness to participate in the study. The eligible nurses were approached and gave their consent to be overtly observed and interviewed during and about their interactions with hospitalized older adults. Further, four student nurses who were doing clinical placements in the hospitals and caring for hospitalized older adults, two middle unit managers, and one nurse assistant were also recruited following preliminary data analysis to identify and follow clues from the initial analysis, clarify uncertainties, fill gaps, check hunches, and test interpretations as the study progressed (Chun Tie et al., 2019). Those who could articulate in English or French, were involved or not in the day-to-day care of hospitalized older adults admitted, with any experience, were sampled. This was because there were nurses with less than 2 years of experience who were communicating with older adults, student nurses who were on clinical placement, as well as nurse managers who sometimes administered care to patients. To be recruited for interviews, nurses were approached in the nursing station when they seemed free and provided with the information related to the study to obtain their consent. Thereafter, individual interviews at a convenient time to them were arranged.

Data Collection

Data were collected by the principal investigator (EWK) between July 2018 and January 2020 using overt participant observations and individual interviews. Data collection

commenced with a month-long of overt observations of interactions between 10 nurses and hospitalized older adults. The researcher observed how these nurses communicated nonverbally with older adults during different types of interactions. The observations were recorded as field notes promptly after each observation because the PI was not granted permission to video record. An observation guide, which consisted of a set of questions under the rubric "What is going on here?" as suggested by Corbin and Strauss (2015), gave structure to the note-jotting. After, there was an immediate rewriting of each observation while the event was still fresh in the memory. The interactions included nursing care related tasks, social interactions, and health education interactions. Data analysis of the observations guided the development of an interview guide, which was refined throughout data collection, and was used to conduct individual in-depth interviews with nurses.

Concerning individual interviews, nurses observed using nonverbal communication with hospitalized older adults were then approached for further participation in the study when they seemed not too busy by the nurse's station or during lunch breaks. Thereafter, dates and times for the interviews were arranged. The initial interviews were informed by the analysis of observations as the interview with each participant was related to the captured observations of his or her interactions with hospitalized older adults. The interviews informed each other as each interview was transcribed and analyzed immediately to inform subsequent interviews and theoretical sampling. That allowed the generation of increasingly focused but not leading questions for subsequent interviews (Charmaz, 2014). The first open-ended question asked to each participant was: "How do you communicate nonverbally with hospitalized older adults?" This was followed by probing questions, which allowed for the PI to ask for more clarity about the observations captured and the emerging concepts. Also, when a concept emerged from the analysis, it was added in the subsequent interviews. For instance, when the concept "*older adults are like children*" came from one participant, that question was then added in the subsequent interviews. Fourteen interviews were conducted in French, except three interviews which were conducted in English because French is mostly spoken in these two regions of Cameroon. Interviews, which lasted about 60 minutes, were conducted at the time most convenient for the participants in the nursing station. Interviews were continued until data saturation of seventeen nurses was achieved.

Data Analysis

To analyze the data, written texts of the observations were broken into detailed pieces while the interviews were transcribed verbatim. Grounded theory data analysis strategies of open-coding and constant comparative analysis were used to identify and organize categories (Corbin & Strauss, 2015). The researcher used NVIVO version 12 qualitative data analysis computer software to import transcripts, write

Table 1. Description of Sample.

Hospital #1		
Position	Level of education	Years of experience
Staff nurse	Bachelor's degree in nursing	4
Staff nurse	Diploma in nursing	13
Middle manager	Bachelor's degree in nursing	10
Student nurse	Undergraduate student	First year
Student nurse	Diploma student	Second year
Hospital #2		
Position	Level of education	Years of experience
Staff nurse	Diploma in nursing	23
Staff nurse	Specialization in geriatric nursing	11
Unit manager	Specialization in geriatric nursing	30
Staff nurse	Diploma in nursing	11
Staff nurse	Diploma in nursing	9
Staff nurse	Specialization in geriatric nursing	3
Staff nurse	Specialization in geriatric nursing	6
Staff nurse	Nurse aid certificate	14
Staff nurse	Specialization in geriatric nursing	5
Student nurse	Nurse aid student	First year
Student nurse	Nurse aid student	First year

memos, code conceptual categories, properties, and dimensions from the data, and conduct data analysis. Data were initially coded sentence-by-sentence using an inductive open coding approach. The researcher then refined and grouped similar codes into categories and subcategories using constant comparison.

Ethical Considerations

Ethical clearance was obtained from the University of KwaZulu-Natal Humanities and Social Sciences Research Ethics Committee (reference number HSS/2008/017D) before the commencement of the study. Permission to conduct the study from the two participating hospitals in Cameroon was also obtained. A covering letter and informed consent explaining the purpose and nature of the study were given to each participant. The participants were informed that they could withdraw from the study at any time with no due penalty or repercussion. They were assured that no information given by them would be shared with another person without their authorization. They were not to receive monetary benefits for participating in the study. The participants were allowed to ask any questions before the voluntary signing of both consents to participate in the study and to be observed and/or audio-recorded. To maintain anonymity, pseudonyms were used.

Rigor

To ensure the trustworthiness of the data and analysis, the criteria of credibility, transferability, dependability, and confirmability described by Lincoln and Guba (1985) were

used. Credibility in the study was promoted by member check, where the researcher confirmed what she observed during interviews with the nurses, and went back to nine of the participants with the corresponding transcripts for their validation and confirmation. Peer debriefing was done with two senior colleagues to confirm categories and themes. Confirmability was ensured by triangulating data sources (observations and interviews) and validating audiotaped and transcribed transcripts against categories and themes through constant comparison. Dependability was ensured by data quality checks. This was done by the consultation with expert seniors in grounded theory and the peer review of coding by senior qualitative researchers. Transferability was established by rich descriptions of informants, study context, research procedures, and the provision of quotes from the interviews to enrich findings. As for the positionality, from a symbolic interactionist position, the authors believe that (1) the realities are considered to exist for human beings in a world of shared symbolic meanings, (2) the researcher and research participants are assumed to be interactively linked in a mutual relationship in the natural field to investigate their behaviors, and (3) human beings and shared meanings of reality can be defined only through interaction between and among the researcher and participants in the context of the phenomena of interest.

Findings

A sample of 17 participated in the study as described in Table 1. These included two middle unit managers, one first-line unit manager, nine certified nurses, one certified nurse

assistant, and four student nurses. About 16 participants were female and 1 was male. This is common in Cameroon where nursing is considered a female dominant profession. The majority of nurses were aged 45 years and below. Their years of nursing experience ranged from 1 to 32 years.

Three categories of factors were identified as influencing the effectiveness of nurse nonverbal communication with hospitalized older adults. The categories were: (1) nurse intrinsic factors, including five sub-categories, (2) nurse views of older adults, including two sub-categories, and (3) hospitalized older adult related factors, which included two sub-categories.

Nurse Intrinsic Factors

There were nurse related factors that influenced nonverbal communication with hospitalized older adults. They included nurse beliefs, personal experiences, personality traits, and awareness of nonverbal communication. Despite nurses' commitment to their work, their views of hospitalized older adults were influenced by cultural beliefs and negative stereotypes of aging in the wider community, and as a result, ageist attitudes toward older adults were evident in their descriptions of interactions with older adults in the research study contexts.

Nurse beliefs. Nurses' views of hospitalized older adults are influenced by prejudices and stereotypes against older adults in the cultural setting, reflecting ageist attitudes toward older adults. These include a cultural belief that dying older adults are witches and wizards, and can mystically exchange their life with those of nurses attending to them, to live longer, as depicted in the following quotes:

For example, in my village, there is this belief that if you administer care to an old patient that is almost dying, that patient can recover and transfer his death to you. [P12, geriatric specialized nurse, five years of experience]

But we are in Africa, right? They say that wizards, especially dying old people, can exchange their body with the body of a younger person. [P7, diploma nurse, 9 years of experience]

Some nurses reported having accepted these beliefs. However, others rationalized these beliefs as not being relevant to their work as nurses with regards to their communication with hospitalized older adults. Yet they appeared to use various strategies for coping with fears related to these beliefs to care for patients as seen below:

We are no longer afraid of anything, we have already seen a lot. What can still frighten us? Also, there are stereotypes like witchcraft happening in hospitals, preventing a nurse to sit on a patient's bed and all that. I can't do that. I am not afraid of anything. I sit on patients' beds, I touch them. . . [P3, Diploma nurse, 23 years of experience]

We do not ignore our customs or our beliefs because they exist but from the moment we have made commitments to specialize in geriatrics, we shouldn't consider them much. [P12, geriatric specialized nurse, five years of experience]

The nurse beliefs also included their religious beliefs. One nurse reported that her Christian faith helped her not to be afraid of dying older adults, but to be in close contact with them:

The fact that we are Christian gives us the strength to approach a dying older patient. Honestly, if we were not Christians, I do not see how we will have this strength. We will always fear. We will always be afraid to go closer to these people. [P12, geriatric specialized nurse, 5 years of experience]

Another participant added that she prays for older adults silently, which is a way of coping with the fear of dying older adults as seen in the quote below:

I am indeed a born again (Christian), that's why I am not afraid of patients because spiritually I commit my day to God when I get up. I commit my work when I get here in the ward. Several times, I had to pray for patients. I do not pray aloud, I pray in my heart when I touch them. [P10, nurse assistant, 14 years of experience]

Personal experiences. This subcategory refers to nurse professional and personal experiences of contact with older adults. Nurses who had lived with their grandmother or grandfather reported having no problems communicating with hospitalized older adults. Nurses reported that they would use the same techniques they used with their relatives in communicating with the hospitalized older adults they nursed. Even though the hospital environment is not similar to their home environments, their past exposure was reported to facilitate nonverbal communication:

I think that my growing up with my grandmother makes it easier for me to communicate with them. [P15, student nurse, first-year diploma program]

It is not too different from interacting with my grandmother. . . because I have my grandmother, which also contributes to my way of interacting with older patients here. So, this is something that I was already doing, and that I carried over here in the geriatrics ward. [P10, nurse aid, 14 years of experience]

On the flip side, nurses associated nursing experience with the effectiveness of nonverbal communication. They implied that nurses with few years of experience are more likely to have less nonverbal communication skills with hospitalized older adults as captured below:

You have to have the skills in nursing and to know the benefits of nonverbal communication in geriatric care. You have to know how to communicate nonverbally then apply what you know depending on the situation.

Nurses who have just graduated do not have that experience. They cannot easily discern the needs of an older patient and respond to them appropriately. For example, you can walk into a room and find an older person tense, and it doesn't mean anything to you. But for me, who is more experienced, I can discern that maybe he (the old patient) has issues with his loved ones, he is hungry, he is in pain, or he has messed his diaper [P2, middle unit manager, 32 years of experience]

Personality traits. Personality traits mainly referred to the innate character or behavior of someone that can potentially influence how one communicates nonverbally with hospitalized older adults. A nurse referred to personality as portrayed in the quote below:

Well, there is also a fact. Habit is indeed second nature. You know, each person has his character or behavior, and with the skills we acquired from the nursing training, we use nonverbal communication dependently. [P4, geriatric specialized nurse, 11 years of experience]

However, a nurse with 9 years of nursing experience admitted that she is naturally a fearful person, and why when she is afraid of some older adults she avoids them. This prevents her from communicating nonverbally with the avoided patients:

Some patients scare me. Well, maybe I am like that. I am fearful by nature because at home I close the doors as I walk by, the main door, the kitchen door. When someone leaves the main door open, I close it because I am like that. I am scared of things. It often happens that a patient scares me and I avoid him. [P7, diploma nurse, 9 years of experience]

Nurse awareness of nonverbal communication. Awareness of the nonverbal messages sent to others is essential, as it often explains why people respond to us the way they do. During observations, we observed that nurses were not always aware of their body language, nor their physical appearance, during interactions with hospitalized older adults. This was further confirmed by a participant who referred to the physical appearance of nurses that can influence nonverbal communication as seen below:

Sometimes we use nonverbal communication without knowing. We should be aware of the style of gesture to use when communicating with an older patient. Nurses should be aware that, even by scratching my head, I am sending a message. That's why I said that somehow you cannot communicate with a patient without nonverbal communication. Nurses need to understand that nonverbal communication is a serious matter. They also need to understand the benefits and the consequences of nonverbal communication. I forgot to mention that even physical appearance is part of nonverbal communication. You might walk in here like a hemp smoker, a message has already been sent to the patient so we need to be aware. [P4, geriatric specialized nurse, 11 years of experience].

A unit manager linked awareness of nonverbal communication to competency. She argued that nurses cannot claim to

be competent in nonverbal communication if they are not aware of their nonverbal communication:

That's why I'm talking about competence and to be aware of the use of nonverbal communication. You have to be aware of that. That's what skills are all about. It's when you are aware that you're competent in something. Because if you do things but you don't know why you do them, you are not competent. [P5, unit nurse manager, 30 years of experience]

Love for the job. Participants reported that nurses need to love their jobs and older adults to be able to communicate nonverbally with them. In the context of the study and as confirmed by some participants, people enter the nursing profession for job security, even when they have "no calling" to be nurses. Therefore, nurses have to love their job and the older patients as echoed below:

First, you have to love your job and you have to love the older patients. You have to love your patients because some older people come to the hospital in a very bad state whom if you are not a loving person, you may not even touch them. . . as I said earlier, you have to love what you do and love the older patients because to sit next to and touch someone's shoulder takes love. [P5, nurse unit manager, 30 years of experience]

You have to have a lot of love to practice in geriatrics, to be able to bear the whims of the older patients. We treat them with a lot of love and that's what works. You have to be very patient, you have to love the work or you will do things carelessly. When you treat them carelessly, they feel it and they start to hate you. [P10, nurse aid, 14 years of experience]

Participants also described factors related to older adults they thought influenced nurse nonverbal communication.

Nurse views of hospitalized older adults. Nurses' descriptions of their interactions with hospitalized older adults varied based on their views of hospitalized older adults. Some nurses described their nonverbal communication in ways that infantilized the older adults and reflected ageist attitudes. For example, one nurse stated:

I told you that older patients, especially at a certain age, are considered babies. Yet a baby and an adult are different. For a baby to understand, it takes repetitions and many gestures so that the baby can understand you, while the adult is easy, but with older patients, you have to repeat yourself several times for them to understand you, they are just like babies. [P12, geriatric specialized nurse, 5 years of experience]

A specialized nurse in gerontology also saw older adults as children as seen in the quote below:

They are a bit like children with whims, with desires. They are really like children. They behave like children so sometimes it makes it difficult to talk to them because they don't understand like children don't. We have to use gestures. [P9, geriatric specialized nurse, 6 years of experience]

On the other hand, some nurses had positive views about older adults that included their keen sense of observation and interpretation of nonverbal cues. Consequently, those nurses paid special attention to their nonverbal communication and the effect it may have on older hospitalized patients, as illustrated in these quotes:

This is why we smile and we have serene facial expressions so that the patient does not feel his condition through our face because the old people especially because they have lived a long time, so they can interpret a lot of things, they easily see some things you are not saying verbally. [P10, nurse aid, 14years of experience]

It is just to say that older people know many things and are very observant. They see everything even if they are silent. It's as if they analyze any movement or anything in our way of doing things. This makes us vigilant with our nonverbal communication. [P11, diploma nurse, 13 years of experience]

Hospitalized Older Adult-Related Factors

Some factors were related to older adults, which can influence nonverbal communication. These include older adults' financial situation and older adults' moods. In Cameroon, there are out-of-pocket payments for healthcare services in public hospitals, where patients pay for their consultation fee, their medication, and their hospitalization fee beforehand. With this regard, participants mentioned the financial situation of older adults as an influencing factor as demonstrated in a quote below:

The financial limitation is an obstacle to nonverbal communication because when the patient does not have money and I too do not have money to help him, I avoid the patient. At some point, it becomes embarrassing for him too. Because he knows his financial situation, he pulls back. Well honestly, when I can't do anything myself to help him, and with the workload, I forget that the patient is there. [P7, diploma nurse, 9years of experience]

For the above-mentioned instance, it was observed that some nurses stood at the door to ask the patients if they had bought their medication. In the case where patients had no medication, nurses sometimes did not bother to enter the room to interact or communicate further with the older patient. They skipped that patient and went to the next one. When they saw that a particular patient was not having his medication for days, they gave up even asking him. They assumed that when the medication was available, the family would alert the nurses.

On the other hand, hospitalized older adults who were seen as "rich" influenced the nonverbal communication of nurses positively. In the quote below, a participant reported avoiding the use of a phone while administering care. Yet, this participant was observed using a phone during interactions with older adults:

In case rich older patients, you might walk in their room while having a conversation on the phone about drinking a beer. They

would automatically think that if you drink beer, you cannot touch them because you are a drunkard. Sometimes when I am on the phone in front of patients, it sends a message that the patient has already decoded. So, I mind my nonverbal communication. [P4, geriatric specialized nurse, 11 years of experience]

Hospitalized older adults' positive mood was reported by some nurses as a facilitator of nonverbal communication, as shown in the following extracts below:

Their mood will determine what I do. If they are in a positive mood, it is easier to smile at them and spend more time with them. [P9, geriatric specialized nurse, 6 years of experience]

One day, I walked into a room and saw a sad patient, and I smiled toward him until he could respond to me. The patient's sadness was what pushed me to use a smile as a nonverbal communication strategy and it worked. [P12, geriatric specialized nurse, 5 years of experience]

However, one participant mentioned that nurses should constantly adapt their nonverbal communication based on the older adults' mood as seen in the quote below.

Nonverbal communication differs. When she arrives at D1 (admission ward), it's the welcoming phase and the first contact. As days go by, she may have problems or that she is unhappy. You can see that there is a change compared to the 1st day, and that leads you to change gradually the nonverbal communication with her. [P2, middle unit manager, 32 years of experience]

Discussion

This paper aimed to explore and describe factors that influence nurse nonverbal communication with hospitalized older adults in two public hospitals in Cameroon from the nurse perspectives. The findings revealed that both the nurse related factors and hospitalized older adult-related factors influenced effective nurse nonverbal communication with hospitalized older adults. These findings are supported by O'Hagan et al. (2014) and King et al. (2015) who reported that both nurse and patient related factors contribute to effective communication.

With regards to nurse related factors, the findings indicated that nurse beliefs, personality traits, personal experiences, and love for their job played an important role in influencing nurse verbal communication with hospitalized older adults. This explains what Bateson (1972), in his circular transactional model of communication, described as intrinsic factors considered as intrinsic to the sender of the message. The most striking intrinsic factor reported in this study to influence nurse communication with hospitalized older adults was the cultural beliefs, where nurses believed that dying hospitalized older adults could perform witchcraft during hospitalization. This belief hindered some nurses from getting close to or touching a dying older patient; thus, negatively affecting nonverbal communication. Similar findings have been reported in Ghana, where Amoah et al. (2018)

reported that cultural beliefs were a barrier to effective communication between nurses and patients. However, culture has been identified as both facilitator and barrier to effective communication (Del Pino et al., 2013; Savio & George, 2013) and it has been linked to the quality of care (Tork et al., 2019).

The findings of this study further highlighted that nurse religious beliefs facilitate nonverbal communication with hospitalized older adults, whereas, in Ghana, patients' religious beliefs were reported as barriers to effective communication with nurses (Amoah et al., 2019). For instance, it was reported that Muslim patients expected nurses to bow when attending to them. Those who did not bow to every patient because of limited time were seen as insolent. This negatively affected the level of communication with patients (Amoah et al., 2019). Cameroon is a predominantly Christian country which may explain why some participants reported that their Christian beliefs played a role in their nonverbal communication. This shows that culture and religion should not be underestimated when exploring factors influencing effective nurse nonverbal communication with hospitalized older adults.

Our findings also highlighted nurse awareness of their behaviors in influencing their nonverbal communication with older adults. Although nonverbal messages are often subconsciously transmitted, many of the nurses were aware and mindful of their value when communicating with patients, and made efforts to discern if their behaviors reflect the values that patients expected (Ahmadi & Kiani, 2019; Wiechula et al., 2016). Others have reported that awareness of one's nonverbal messages leads to a greater understanding of the messages exchanged (Sudirman & Sidin, 2016). Awareness also explains why people respond to us the way they do, and influences how the other person communicates with us (McCabe & Timmins, 2013). It is therefore crucial for nurses to be aware of their body language and the use of personal space when communicating with patients (Tork et al., 2019).

One's work experience was also reported as one of the factors influencing effective nurse nonverbal communication with hospitalized older adults. Participants indicated that nurses with more years of experience could communicate nonverbally with older adults more easily than less experienced nurses could. Similarly, in other studies, more years of experience was mentioned as one of the influencing factors of communication. It has been shown that experienced nurses tend to remember how to communicate with patients and had better communication skills (Farzi et al., 2022; Tran et al., 2020; Yazew et al., 2021). Contrary to our findings, Radsma (1994) argues that long-time practicing nurses have high tendencies to ineffective communication skills. This is because they may have got used to the same way of communicating that they are no longer aware of their nonverbal behaviors which can influence their communication with patients.

In our findings, patients' financial status was reported to influence nurse nonverbal communication with hospitalized older adults. In Cameroon, the cost of purchasing healthcare is relatively high for the average older adult because there

are out-of-pocket payments for every healthcare service rendered, even if this is in public hospitals (Emeh, 2020). Patients pay for their consultation, medication, and hospitalization fees before treatment. In this study, nurses reported avoiding patients who have limited finances to pay for basic medical care while in hospital. This could be explained as a nurses' way of saving the patients from embarrassment, caused by failure to pay for their own basic health needs. Avoiding hospitalized older adults who could not pay for their basic care could be seen as missing opportunities for meaningful interactions and nonverbal communication (Kerr et al., 2019), which could be needed by these patients.

The study revealed that some nurses had ageist attitudes as they saw hospitalized older adults as infants or witches or wizards. The existence of ageism in healthcare settings makes it crucial to design interventions targeting healthcare professionals and students as well (Tullo et al., 2010). To improve attitudes toward and communication with older adults, the WHO (2017a) recommended that healthcare professionals promote healthy aging by ensuring that their practice enables and empowers the autonomy and independence of older adults. It has been suggested that educational programs for healthcare professionals and nurses, and the promotion of empathy through simulation and games can improve attitudes toward and communication with older adults (Inouye, 2021; Martínez-Arnau et al., 2022).

Conclusion

Understanding the nurse intrinsic factors and other nurse related factors for effective nonverbal communication with hospitalized older adults is important when developing training material for nurses. Addressing factors that can impede effective nurse nonverbal communication with hospitalized older adults is important. This includes debunking all religious and cultural beliefs as well as negative stereotypes that the nurses may have about hospitalized older adults through education of nurses and the public to enhance the older adults care in Cameroon and Sub-Saharan Africa. Nurses should be assisted to know and appreciate the value of their nonverbal communication when dealing with all patients irrespective of their financial status.

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Article

A Model for Effective Nonverbal Communication between Nurses and Older Patients: A Grounded Theory Inquiry

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Abstract: Nonverbal communication is an inevitable art to be effectively mastered by nurses. Nurse nonverbal communication has many benefits when it is effective. For instance, nonverbal communication is important to convey affective and emotional information, and demonstrate respect for and build therapeutic relationships with older patients. As the older population is growing fast worldwide, effective nonverbal communication with older patients is an essential skill for nurses and will improve patients' satisfaction and the quality of care. Therefore, this article presents a model to guide effective nonverbal communication between nurses and older patients. A Grounded Theory approach guided the study. Data were collected between July 2018 and January 2020 through overt participant observations and individual interviews. Purposive and theoretical sampling were used to select 13 clinically experienced nurses, 4 nursing students, and 8 older adults. Data analysis encompassed open coding, axial coding, and selective coding. The results showed that effective nonverbal communication emerged as the co-phenomenon hinged within context and/or environment and is influenced by certain factors. This model, which is in support of person-centered communication and care, advocates for effective nonverbal communication between nurses and older patients.

Keywords: effective nonverbal communication; nurse–older patient relationships; grounded theory; Cameroon



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1. Introduction

Worldwide, older adults account for 1.05 billion people, with 74.4 million in African countries with the expectation to reach 235.1 million by 2050 [1]. In sub-Saharan Africa, the burden of geriatric diseases is growing, with more older adults requiring geriatric healthcare services and frequent hospitalization with longer stays [2,3]. This is especially the case in sub-Saharan Africa where there are few long-term care settings [4]. With hearing deficits, changes in attention and coding of information, and restrictions in interaction, participation, and effective verbal communication [5], nurses' effective communication with older adults emerges as an essential skill in geriatric care [6].

Communication, which is important to understand older adults' needs and support their health and well-being [7], is defined as the process of sending and receiving messages to share knowledge, attitudes, and skills [8]. It includes both verbal and nonverbal components, since it is not just the mere transmission of information [9]. While verbal communication denotes the transmission of messages through spoken words [8], nonverbal communication describes the reaction of the face, body, or voice, including what is expressed between each other [10,11]. Nonverbal communication is important to convey affective and emotional information, demonstrate respect for patients, and build therapeutic relationships with patients [12,13]. This makes nonverbal communication unique and more important for effective communication between nurses and older patients. When nurses enhance their communication skills, it improves patients' satisfaction as well as the quality of care [14,15].

Communication, as one of the important aspects of caring for patients that affects all other aspects of care, should be given special attention [16]. To date, there are few nonverbal communication models identified to help nurses to communicate effectively with patients let alone older adults. The first model is SOLER (Square, Open, Lean, Eye contact, Relax) developed in 1975 by Eagan to describe effective body language employed to make others feel listened to. It only includes proxemics (use of space) and kinesics (movements of the body), and mostly focuses on interactions during a consultation, not during hospitalization [17]. The second model is SURETY (Sit at an angle, Uncross legs and arms, Relax, Eye contact, Touch, Your intuition), which criticizes and advances the SOLER model by including the use of touch, emphasizing the importance of individual intuition, and encouraging the inclusion of therapeutic space [18]. Although it includes proxemics, kinesics, and haptics (use of touch), it has been developed to encourage the inclusion of therapeutic space and intuition in verbal communication skills' content. None of these models were intended for nurses' effective nonverbal communication with older patients or were derived from the participants' views on nonverbal communication between patients and nurses. Moreover, a model with consideration of nurses' views is more likely to be appropriate and acceptable by nurses [19], because healthcare workers' perspectives are important in determining effective strategies [20].

As of 2018 in Cameroon, the growing older population is translating to increased healthcare demand [2]. Unlike other African countries such as Mauritius, Seychelles, and South Africa, there is no national effort to develop long-term care settings in Cameroon [4]. As a result, older adults solely utilize hospital settings when requiring medical assistance [21,22] where nurses communicate more often with them. Additionally, Cameroon is one of the most linguistically fragmented countries in sub-Saharan Africa, with approximately 250 indigenous languages, apart from English and French which are both considered official languages [23]. As a result, it is less likely that a nurse speaks the same vernacular as an older patient who does not speak French or English. Although communication skills training and models do not necessarily ascertain that nurses will be skilled communicators [24], they might be helpful in assisting nurses to improve their nonverbal communication with the older adult population. As some of these older adults mostly rely on nonverbal communication because of their functional impairments [25], nurses need to be equipped, more than ever, with tools to improve their communication skills. Therefore, this paper aims to present a model for effective nonverbal communication between nurses and older patients.

2. Materials and Methods

2.1. Design

The purpose of this study was to develop a model for effective nonverbal communication between nurses and older patients during hospitalization. It was for this reason that a qualitative Grounded Theory (GT) approach was followed [26]. GT was chosen because "it is a useful methodology for the study of interpersonal activities between nurses and patients and others because a social interaction is at the heart of the caring process in nursing" [27] (p. 16).

2.2. Study Settings and Context

The study took place in two public hospitals in the east and central regions of Cameroon, a low-and-middle-income country at the heart of the Gulf of Guinea in Central Africa [28]. Both hospitals are in the central level of the three-level pyramidal Cameroonian healthcare system. The first hospital was chosen because it is the only one with a geriatric unit in Cameroon. Similarly, the second was selected because it is a referral regional hospital. In both hospitals, older adults are admitted to adult wards with younger adults but are categorized according to their illness. In addition, both hospitals employ qualified nurses and nurse assistants, irrespective of registration status given that registration was not mandatory in Cameroon before 2022.

2.3. Study Participants and Sampling Methods

In keeping with GT, which aims to recruit participants with rich information on the phenomenon under investigation, purposive and later theoretical sampling were used. Firstly, 10 clinically experienced nurses who were involved in the day-to-day care of older adults admitted to the hospital, could articulate in English or French, and were willing to participate in the study were purposively sampled. Furthermore, 8 older adults who were not critically ill, could articulate in English or French, and expressed a willingness to participate in the study were also purposively sampled. Theoretical sampling included the recruitment of additional participants who cared for older patients. These were 2 middle unit managers, 4 undergraduate student nurses allocated for clinical placement in the selected hospitals, and 1 nurse assistant. We collected and analyzed data simultaneously as recommended in Grounded Theory; thereafter, we stopped recruiting and including participants when no additional information emerged from the analysis. All up, 17 nurses and 8 older patients were included in the study. Their characteristics are described in Table 1.

2.4. Data Collection

Data were collected between July 2018 and January 2020 through overt participant observations and individual interviews. The principal investigator commenced with a month-long observation of how nurses communicated nonverbally with older patients during different types of interactions. Such interactions were, but are not limited to, day-to-day nursing care-related tasks, social interactions, and health education interactions. The observations were recorded as field notes because no ethics permission was granted for video recording. Data from the observations guided the development of the initial interview guide which was used to conduct individual in-depth interviews with participants.

Only the nurses who were observed met the criteria to be interviewed. Therefore, the principal investigator approached them in the nursing station when they seemed free, verbally provided information about the study, and issued each with an information letter with the intention to obtain consent to be interviewed. Following this, those nurses who showed interest in participating in the study were booked for individual in-depth interview at times most convenient for them. The initial interviews captured the meaning and channels of nonverbal communication from the nurses' perspectives. One open-ended question was asked: "How can you define nonverbal communication with older patients"? This was followed by probing questions that allowed the researcher to elicit more information, obtain more clarity, and confirm data captured during observations. Due to the constant comparative methods for data collection and analysis, interviews informed each other. Each individual interview, conducted in the participant's preferred language, lasted between 50 min and 60 min. Subsequently, field notes were recorded during and after the interviews. Data saturation was achieved at interview 17 when no additional information emerged.

The same principles were followed to recruit and include older adults for interviews. A total of 47 older adults were referred to the study, but 13 did not meet the eligibility criteria. The remaining 34 older patients who met the inclusion criteria were individually approached at their bedside when they seemed free with no visitors nor care activities happening. The principal investigator introduced herself, explained the purpose of the study, and sought consent for participation in the study. Consent to be observed was provided by 29 older patients, of whom 8 were interviewed thereafter. Older adults who consented to participate in the study either agreed to be interviewed on the spot or preferred to make an appointment for a different time. The initial interviews with older adults captured their interpretation and understanding of nurse nonverbal communication. One open-ended question was asked: "How do you understand when a nurse communicates without saying a word?" This was also followed by probing questions for more clarity and to obtain additional information. The interviews with older adults also informed each other. Field notes were also taken during and after interviews. Data saturation was achieved at interview 8 when no additional information emerged.

Table 1. Sociodemographic characteristics of the participants.

Participant	Age (Years)	Gender	Hospital	Position	Types of Nurses	Years of Experiences
P1	26–35	Female	Hospital 1	Staff nurse	Degree nurse	4
P2	46–55	Female	Hospital 2	Middle unit manager	Diploma nurse	32
P3	36–45	Female	Hospital 2	Staff nurse	Diploma nurse	23
P4	36–45	Male	Hospital 2	Staff nurse	Geriatric nurse	11
P5	46–55	Female	Hospital 2	Unit manager	Geriatric nurse	30
P6	46–55	Female	Hospital 2	Staff nurse	Diploma nurse	11
P7	36–45	Female	Hospital 2	Staff nurse	Diploma nurse	9
P8	26–35	Female	Hospital 2	Staff nurse	Geriatric nurse	3
P9	26–35	Female	Hospital 2	Staff nurse	Geriatric nurse	6
P10	26–35	Female	Hospital 2	Staff nurse	Nurse aid	14
P11	36–45	Female	Hospital 1	Staff nurse	Diploma nurse	13
P12	36–45	Female	Hospital 2	Staff nurse	Geriatric nurse	5
P13	26–35	Female	Hospital 1	Middle unit manager	Degree nurse	10
P14	18–25	Female	Hospital 1	Student nurse	Degree program	2nd year
P15	18–25	Female	Hospital 1	Student nurse	Diploma program	1st year
P16	26–35	Female	Hospital 2	Student nurse	Student nurse aid	1st year
P17	26–35	Female	Hospital 2	Student nurse	Student nurse aid	1st year
P18	78	Female	Hospital 1	N/A	N/A	N/A
P19	65	Male	Hospital 2	N/A	N/A	N/A
P20	64	Female	Hospital 2	N/A	N/A	N/A
P21	82	Female	Hospital 2	N/A	N/A	N/A
P22	67	Male	Hospital 2	N/A	N/A	N/A
P23	61	Male	Hospital 1	N/A	N/A	N/A
P24	92	Male	Hospital 2	N/A	N/A	N/A
P25	70	Female	Hospital 2	N/A	N/A	N/A

2.5. Data Analysis

Data were analyzed by three researchers, who were all female and comprised a principal investigator and two academics with PhDs who have supervised graduate students following qualitative research methodology. None of the researchers worked or was working at the data collection site; therefore, they had no relationship with the participants. Data analysis encompassed open coding, axial coding, and selective coding, which seemed intertwined as the researchers moved back and forth between data collection and data analysis. The process is referred to as a constant comparative method by Strauss and Corbin [29]. This allowed the generation of increasingly focused questions, thus providing direction for subsequent interviews [30]. In addition, constant comparison was used throughout the study. The software NVIVO version 12 [31] was used to import transcripts, write memos, code conceptual categories, properties, and dimensions from the data, conduct data analysis, and refine the model.

Data were initially coded sentence-by-sentence during open coding to summarize and define emerging categories, paying special attention to the processes linking them. This was followed by axial coding, where data were reassembled and codes refined and categorized into categories and subcategories [32]. This allowed for a better understanding of the categories, with similar ones merged into higher-order categories. After creating concepts and categories from data in the open coding phase, the researchers continued to group categories and subcategories in the axial coding phase. The researchers then developed a category by specific conditions, context, and actions or interactions by which it was managed [33]. The researchers further refined a list of categories by carefully trying to merge or delete some of them after making possible connections. Categories were linked depending on their properties and dimensions. Some categories were named in words and phrased by the participants, while others were renamed by the researchers' academic and professional knowledge and readings. These concepts are referred to as "literature-driven concepts" [29]. The researchers continued to code new data, re-examining and comparing the data until saturation was reached. Selective coding followed axial coding, which involved the process of selecting the core category "effective nonverbal communication", systematically relating it to other categories, validating those relationships, and completing categories that needed further refinement and development; by following the process of reduction and comparison. The iterative nature of the data analysis process allowed the researchers to repeatedly ask questions while studying the data, in addition to using the "waving a red flag" technique, which allowed them to look beyond the obvious in the data [26]. The researchers were convinced that the model began to emerge as soon as the diverse properties began to integrate.

2.6. Ethical Considerations

Ethical approval (reference number HSS/2008/017D) to commence the research study was obtained from the University of KwaZulu-Natal Humanities and Social Sciences Research Ethics Committee. Permission was further obtained from the two participating hospitals. Following ethical approval requirements, before data collection, an information letter explaining the purpose and nature of the study was given to each participant. The participants were allowed to ask any questions before the voluntary signing to participate in the study, be observed, and be audio-recorded. The participants were informed that they may withdraw from the study at any time with no due penalty or repercussions. Furthermore, all participants were assured that no information provided by them would be shared with another person without their authorization. To maintain confidentiality, pseudonyms were used. Participants did not receive monetary benefits for participating in the study.

2.7. Rigor

To ensure trustworthiness, the researchers used the criteria of credibility, transferability, dependability, and confirmability [34]. The credibility of the study was promoted by the

researchers' prior engagement with participants. Prolonged engagement was ensured by the establishment of relationships with participants during the study. Data analysis was audited by taking observational field notes regarding the context of the interviews, with peer debriefing conducted to confirm emerging categories and themes. Confirmability was ensured by triangulating data sources and validating audiotaped and transcribed transcripts against emerging categories and themes through constant comparison. Further, nine interviews were returned to participants who did not add much to what they originally said. Dependability was ensured by data quality checks with an expert in Grounded Theory, peer review of coding, and consultation with qualitative researchers to validate the codes and categories that emerged from the analysis. Finally, transferability was established by rich descriptions of the study context, informants, research procedures, and the provision of extracts from the interviews to enrich the findings.

3. Results and Discussion

The model was developed based on the findings from open coding, selective coding, and axial coding. Tables 2–4 summarize the extracts from the participants and the observations, which served as a starting point to develop the model.

Table 2. Extracts of the contextual conditions forming the basis for developing the model.

Linguistically fragmented country	<p>... We have different mother tongues, for example, because we are in a diversity of languages here in Cameroon. (P2, middle unit manager, diploma in nursing)</p> <p>Many of those 60 years and older do not speak neither French nor English. It is often the fofouldé (tribe in Cameroon), the Makas (tribe in Cameroon) and all that. After school, you find yourself in a region where you perhaps speak French and your own mother tongue while the patients do not understand French nor your mother tongue. What do you do? You use nonverbal communication. (P1, staff nurse, degree in nursing)</p>
Context and environment	<p>In Cameroon, we believe that older people want to cling to life. They do not want to die. When they feel that they are about to die, they can exchange their life with younger lives to increase their lifespan. That is why younger people do not want to be close to a dying older person. It is like the famous video game Mario. When your energy level gets low, you should collect coins to increase your lifespan to continue to run. It is the same with older people. (P23, older man, 61 years)</p> <p>For example, in my village, there is this belief that if you administer care to an old patient that is almost dying, that patient can recover and transfer his death to you. (P12, staff nurse, specialization in geriatric nursing)</p>
Inexistent long-term care facilities	<p>I think it would be different because here (in the hospitals), younger patients are mixed with older patients to young ones. Whereas there (long-term care facilities), you only care for older patients. I think it will help them better to be among themselves. Unfortunately, we don't have homes in Cameroon yet. (P11, staff nurse, diploma in nursing)</p> <p>I think other structures should be created because it seems that in Cameroon, a geriatric unit is only functional here. With the ageing population, we need private structures for older patients because some families tell us that they wish there was a place where they could send their parents there for three months. Here in the hospital, you cannot keep a patient for three months because of the shortage of beds. If the government could develop structures for older people, it would be great. (P7, staff nurse, diploma nurse)</p>

Table 3. Extracts of the core phenomenon forming the basis for developing the model.

Core Phenomenon	Channel: Artifacts (use of objects)	<i>When you want to know the time, you can show them a watch. So, we can use objects to pass a message, depending on what we want to tell the person. (P8, staff nurse, specialization in geriatric nursing) You put a bottle of water in front of them, so that they understand that you are giving them water, and they will drink. (P7, staff nurse, diploma in nursing)</i>
	Channel: Haptics	<i>Yes, we touch the cheeks, we touch the hands. We greet, but touch his hand, so that he feels that we are here. (P10, staff nurse, nurse aid) Sometimes it takes a touch to make a change in them (older patients). (P17, student nurse, 1st year) When the person is sleeping, I touch him gently to wake him up. (P12, staff nurse, specialization in geriatric nursing)</i>
	Purpose: Support verbal communication	<i>You use hand gestures, facial expressions, eye gazes, all that to support what you are saying to him. (P1, staff nurse, degree in nursing) For me, nonverbal communication is anything we said or do without using words. For instance, it can be body language, smiling, frowning, a tap on a back, eye gazing, grumbling, and a lack of reaction when someone speaks to you. (P13, middle unit manager, degree in nursing)</i>
	Purpose: Build relationships with older patients	<i>As we said earlier, nonverbal communication is a form of exchange, a form of conversation with the older patients. The goal, I believe, is to establish a very good therapeutic relationship because we have to reassure the person, we put them at ease. I think nonverbal communication is to better establish a relationship with the older person and to encourage her to open up more. (P4, staff nurse, specialization in geriatric nursing) Often, nonverbal communication is to initiate the first contact in the relationship with older patients. Along the way, they notice that when the nurses come, they wave at them. So, even when the nurses forget to wave, the patients wave at the nurses. As time goes by, smiling with them, sitting on the bed close to them will help build the relationship. (P7, staff nurse, diploma in nursing)</i>

Additionally, Figure 1 indicates the elements of the model in line with Strauss and Corbin's paradigm, which include the antecedents, the contextual conditions, the core phenomenon, the actions and interaction strategies, the intervening conditions, and the outcomes.

These elements (Figure 1) were used as the foundation for the development of this model. Some of these elements were extensively described in other papers by the same lead author [35,36]. Hence, this paper focuses on the emerged model, to enhance nonverbal communication between nurses and hospitalized older adults.

We followed the components for developing a model, which include the purposes of the model, the concepts and their definitions, the structure of the model, and the assumptions of the model, as described by Chinn and Kramer [37].

3.1. Purpose of the Model

According to Chinn and Kramer [37], the purpose of the model justifies the context and situation in which the model applies. Although communication is bidirectional, nurses are responsible for its proper conduct [38]. Therefore, this model of effective nonverbal communication between nurses and older patients, in the context of this study, provides a framework that guides nurses to effectively communicate nonverbally with older adults in hospital settings. Furthermore, in-service training for nurses who were not part of

this study can be developed based on the elements provided by this model. This model can be used by curriculum developers and policymakers as a guide for nursing schools in the teaching and learning of nonverbal communication to both undergraduate and postgraduate students. Furthermore, this model answers the United Nations' [39] call for more data on older adults from developing countries, thus contributing to the limited body of knowledge in the area of nonverbal communication in geriatric care in hospital settings [40], as compared to nonverbal communication in long-term care settings.

Table 4. Extracts of the outcomes forming the basis for developing the model.

Outcomes	Compliance with care	<i>We had patients who were not talking when they first arrived, they totally refused to eat, but as we spent time with them, reassuring them all the time, touching them, they started to give in. That particular patient ended up taking his medication and eating by his own. That made us happy. (P8, staff nurse, specialization in geriatric nursing) ... Even if she doesn't like a particular drug, she will take it to please you in return. (P7, staff nurse, diploma in nursing)</i>
	Older patients' satisfaction	<i>When they smile with me or touch my hand, I am happy; I am pleased. I wish I could stay longer here. (P18, older woman, 78 years) So, the gestures play a lot because they bring joy in the unit, they bring joy to the family members as well as to the patients. The patients feel that we are willing to listen to them, that we are willing and are doing everything to help them. They are happy. (P10, staff nurse, nurse aid)</i>
	Nurse messages go through	<i>... When you gesture with them, they understand that you are giving them water for instance. They will drink it. Your message went through. Therefore, it (nonverbal communication) helps. (P7, staff nurse, diploma in nursing) Most of the times when they (nurses) use gestures, I understand what they mean. (P25, older woman, 70 years) Even if I speak in French and the patient does not understand, at least he feels that someone is speaking. Through my gestures, he understands what I mean. He interprets my gestures and understands, and my messages get through easily. (P8, staff nurse, specialization in geriatric nursing)</i>

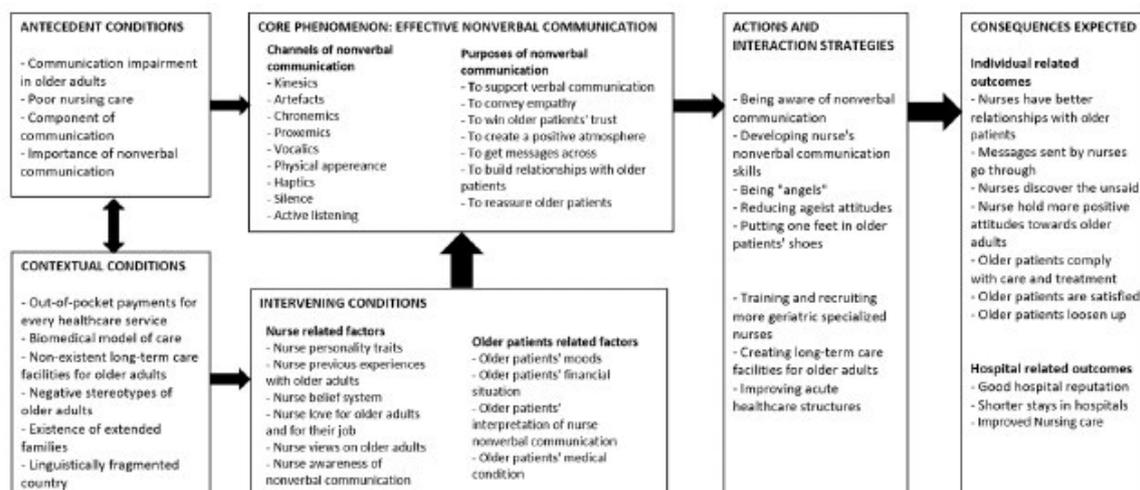


Figure 1. Summary of findings in line with Strauss and Corbin's paradigm.

3.2. Basic Assumptions of the Model

The assumptions that formed the basis of effective nonverbal communication between nurses and older patients in this model are outlined below:

Effective nonverbal communication is present in every healthcare encounter between nurses and older patients because it is impossible not to communicate nonverbally [10]. In other words, whenever there is an interaction between a nurse and an older patient, nonverbal communication is inevitable even when there is no verbal content. Scholars have estimated the amount of nonverbal content in communication, in comparison to verbal content. They described that nonverbal communication accounts for 60% to 90% of total communication [13]. Thus, nonverbal communication is unavoidable. Therefore, nurses should be aware that their nonverbal communication might send conflicting messages to older patients if they do not match the verbal content. In addition, the awareness of nonverbal messages sent to others is essential, as it often provides an explanation as to why people respond to us in the way they do [41]. Hence, nonverbal communication emerges as an intentional concept, which nurses should be aware of, as it may have negative consequences to the level of care rendered.

Effective nonverbal communication with older patients is person-centered. It is worth noting that older patients are not a homogenous group, as they have different experiences [42] coupled with different nonverbal communication needs. Person-centered care assumes that healthcare workers should communicate and interact with patients in a person-centered way while paying attention to patients' different expectations and needs through verbal and nonverbal communication [43]. Hence, an added assumption in this model is that nonverbal communication is individualized and needs-oriented. Nurses are encouraged to take into consideration older patients' nonverbal communication needs. Despite this, authors acknowledge the beliefs of Chan et al. that initial interactions with older patients tend to be scripted and governed by established social norms [44]. In time, nurses should be able to easily bend or break these norms to align them with each older patient's specific needs.

Effective nonverbal communication is unique, dependent on the context and the nurse rendering care. The model brings forth the assumption that clinical contexts are different, along with the types of interaction with patients and the types of illnesses. On the other hand, nurses bring to the table different backgrounds, training, and personalities. These lead to unique encounters with each one. The emphasis in this model is that unique does not mean chaotic but instead means distinct, that may or may not be automatically replicable to another encounter. Moreover, effective nonverbal communication cannot be reduced to a set of theoretical and linear principles to absolutely follow because there is no universal way to communicate. This allows room for the creativity, flexibility, intuition, and authenticity that are needed in effective communication [44]. Furthermore, as nurses grow in confidence and experience, the model assumes that they will embrace and master effective nonverbal communication in every encounter and obtain mastery over the external display of their emotions. Hence, nurses will become shapers of and accountable for effective nonverbal communication with older patients.

Effective nonverbal communication is a subjective and interactive process which may be misinterpreted or misunderstood. Indeed, there is a risk of miscommunication or misunderstanding that cannot be eliminated when using nonverbal communication [45]. In this model, we posit that nurses interpret situations based on filters and frames. Filters refer to what influences the way nurses attempt to communicate nonverbally with older patients. Such filters are, but are not limited to, nurses' beliefs, past experiences, and personality traits [36]. On the other hand, frames can be defined as a nurse's own interpretation of a situation. As an example, one participant reported that some older patients practice witchcraft in the hospital, therefore preventing nurses from getting closer to them or spending more time with them. According to the participant, this may have negative consequences on the effectiveness of nonverbal communication between nurses and older adults. As nonverbal communication is an interactive process, nurses may misunderstand and misinterpret nonverbal messages sent by older patients. Like nurses, older patients

can misunderstand or misinterpret the nonverbal messages sent to them, resulting in ineffective nonverbal communication. The mismatch in the interpretation and understanding of nonverbal communication may be due to past negative experiences with nurses, critical conditions, or different cultures or religions between nurses and older adults [36]. To minimize misinterpretations and misunderstanding, the model suggests that nurses be encouraged to obtain feedback that ascertains that the older patients have understood, or not, the nonverbal messages sent by nurses. Similarly, nurses should ascertain that they have correctly captured messages sent to them by older patients for the success of nonverbal communication. This is called reaching an area of communicative communality [46].

Effective nonverbal communication is reliant on cultural and religious beliefs complicated by the multilingual nature of the context. Hence, the assumption in this model is that within effective nonverbal communication are the components of religion and culture. As an example, in some cultures or religions, eye contact with an older adult is considered rude; conversely, it can express empathy in other contexts. Another example is affective touch, which can be considered invasive in some contexts. Hence, the model posits that effective nonverbal communication is reliant on one's culture and religion. Within the context of this study, nurses and older patients are often from religious and culturally diverse regions with language differences. Cameroon is known for being multilingual with more than 250 indigenous languages [23] in a population of more than 26 million people. Although there may be instances where both nurses and patients share the same cultural and religious beliefs, the assumption in this model is that different social circumstances, orientations, and languages may influence nonverbal communication. Nurse prudence is therefore essential when initiating nonverbal modalities that can be considered ambiguous.

3.3. Concepts and Definitions

Effective nonverbal communication is the core concept from which other concepts evolve. It is a dynamic and evolving process that takes place as the relationship with an older patient develops. The emerging concepts in this study and those described in this paper are effective nonverbal communication, context and environment, action and interaction strategies, pillars, and outcomes.

3.3.1. Core Concept

The core concept in this study is effective nonverbal communication between nurses and older patients. It refers to a variety of communicative behaviors that do not carry linguistic content, but are unique, religiously and culturally sensitive, and person-centered. In the literature, common attributes of effective communication include a significant tool in planning and implementing person-centered care, a foundation for interpersonal relationships, and a determinant of promoting respect and dignity [47–49]. On the other hand, inaccurate or ineffective nonverbal communication behavior will not enable older patients to understand and interpret nurse messages. Therefore, it should be accurate to avoid distortion of messages. In this model, effective nonverbal communication entails the channels and the purposes of nonverbal communication in the context of the study. However, the core concept has been extensively discussed in another manuscript [50]. Therefore, the following is a summary of the core concept.

The Channels of Effective Nonverbal Communication

The channels of effective nonverbal communication mostly include haptics, proxemics, kinesics, and vocalics. Few participants mentioned active listening, physical appearance, and artefacts.

Haptics refer to the use of touch or physical contact, which in this study includes handshake, kiss, hug, pat, and stroke.

Proxemics, the use of space and distance, are the physical proximity and distance with older patients. In this model, physical proximity refers to sitting close to older patients,

including sitting on their beds. Physical proximity includes standing at the door to talk to them, sitting far from them, and having their back towards them.

Kinesics are the movements of any part of the body, such as smiling, frowning, leaning forward, and waving hands.

Vocalics are the aspects of the voice used when communicating with older patients. In this study, speaking too loudly, too fast, or even too slow were reported by participants.

Artefacts refer to the use of objects during communication. In this study, some participants reported that they show a bottle or the medication to some older patients who did not understand French to express the time to drink medication. It was followed by a change of position by the older patient, showing that he has understood the message and was ready to swallow his tablets.

Physical appearance refers to how nurses dress when they come to work. As described by one participant in this study, a nurse with a uniform can still look like a drug addict. Another one said that a nurse with a see-through uniform could sexually provoke older male patients.

The Purposes of Effective Nonverbal Communication

The purposes of effective nonverbal communication: the ultimate purpose of nonverbal communication is to help patients with their coping and recovery during hospitalization [51]. In this study, nurses reported that nonverbal communication assisted them in building relationships with older patients, winning their trust, creating a positive atmosphere, supporting verbal communication, reassuring, and conveying empathy to older patients.

To build relationships: Effective nurse–patient communication has been proven to be fundamental to building a positive relationship between nurses and patients [52]. Hence, this model advocates for nurses to use one or more channels of nonverbal communication to express their willingness to build relationships with older patients.

To win patients' trust: Kourkouta and Papathanisou recommend that for nurses to develop relationships with their patients, they must be mindful of their first encounter with those patients because first impressions last forever [35]. Therefore, we encourage nurses to be aware of their body language on their first encounter with older adults.

To support verbal communication: Communication has two components, namely, verbal and nonverbal. The differences in the native languages of nurses and patients creates communication barriers [53]. Moreover, verbal communication and nonverbal communication can conflict with each other in one interaction [10] and patients believe the nonverbal when verbal communication is incongruent with nonverbal communication [54]. Therefore, this model encourages nurses to ensure the congruency of both verbal and nonverbal communication.

To create a positive atmosphere: The hospital environment is stressful to older patients. The noise of machines, the unfamiliar healthcare workers and environment, the pain, the discomfort, and the uncertainty of death lead to patients' emotional fluctuations [55] in an atmosphere of fear and anxiety. Therefore, nurses are encouraged to use nonverbal communication to create a positive atmosphere or to change a negative atmosphere into a positive one.

To convey empathy: Empathy is the ability to understand and share another person's emotions [56]. Nurses are encouraged to communicate to older patients that they are compassionate, interested, and concerned about their situations. Knowing the changes that older adults undergo concerning their physical, psychological, social, and environmental health will help nurses better understand older patients [57].

3.3.2. Context and Environment

Anderson and Risor [58] have argued about the importance of contextualization and how it relates to the notion of causality for eventual understanding and insight. In this study, the *context* refers to the types of encounters between nurses and older patients. These range

from encounters around health communication, nursing tasks, activities of daily living, and normal social life, as described by Barker et al. [59]. The context also encompasses the nursing shortages, excessive workload, and poor communication skills that have been identified by Kwame and Petrucka as some barriers to effective communication with patients [60]. Wards in Cameroon have limited resources and there are out-of-pocket payments for every healthcare service. For example, if patients cannot afford to pay for cotton wool or syringes, they will not receive their prescribed injections. Ward staffing is often limited to one staff member per shift, which limits the interaction of the nurse with the older adult due to lack of time versus accomplishment of the routine.

The environment, within this model, is the ward and the persons involved in the communicative encounter, namely, the nurses, the older patient, and/or the relatives. The ward is mostly a medical ward because there are very few geriatric units in acute settings in Cameroon. Similar to Cameroon, in Ghana [57], older adults are mostly nursed in general wards together with young and middle-aged adults after diagnosis has been classified as a medical or surgical case. In the wards, at least one relative is requested to stay with the older patient 24/7. During their stay, the relatives participate to care (personal hygiene, medicine intake, temperature checking, etc.) when nursing teams are short-staffed and/or alert the nurses when problems arise, such as in Malawi [61]. Moreover, the presence of relatives in the ward has been reported as a nuisance to care [62,63]. All employed nurses are certified but not necessarily registered with the Nursing Council, as registration was not compulsory for practice before 2022. Some older adults are often seen as witches by the community and the healthcare population, similar to Ghana [57] and Uganda [64]. On the other hand, some are also seen as babies or as intelligent people. All the above-mentioned constitute the context and the environment for effective nonverbal communication between nurses and older patients.

3.3.3. The Action and Interaction Strategies

To achieve effective nonverbal communication with older patients, participants reported on a series of strategies that needed to be put in place, referred to as action and interaction strategies according to the GT language. These were, but are not limited to, being aware of one's nonverbal communication, being "angels", putting yourself in the shoes of older patients, and reducing negative attitudes towards older patients. Additionally, creating long-term care facilities, improving acute healthcare structures, enhancing communication skills through education and training, and recruiting more gerontologist nurses were mentioned as strategies for effective nonverbal communication with older adults. However, they will not be discussed in this paper.

Awareness of nonverbal communication: Nonverbal messages are often subconsciously transmitted; thus, nurses tend to be neither aware nor mindful of the value of nonverbal communication when communicating with older patients. In this study, some nurses reported that they had never used nonverbal communication with older patients. This means that they were not aware that they have been using nonverbal communication. Moreover, awareness of one's nonverbal messages leads to a greater understanding of the messages exchanged [65]. Nurses should be on constant guard of their NVC to ensure maximum satisfaction of patients [66], especially their kinesics and proxemics [67]. After all, awareness of nonverbal communication explains why people respond to us the way they do, and influences how the other person communicates with us [41]. This means that if older patients respond to nurses in a certain way, it is because of nurses' nonverbal communication.

Being "angels": Participants described that to achieve effective nonverbal communication with older patients, nurses should be "angels". Angels are commonly described as spiritual beings who do good. In this study, being an angel entailed showing concern and interest in older adults, being kind and close to older adults, and conveying empathy. Furthermore, the angelic being of nurses is further evident in their soft voice tones versus commanding tones and positive facial expressions.

Putting yourself in the shoes of older patients: Ageing is an inevitable event, and it will happen to everyone in the absence of premature death. Nurses reported that they do imagine themselves as older adults. Therefore, they attempt to render imaginary care and nonverbal communication that they would want to receive if they themselves were hospitalized. This particular study finding concurs with that of Van Der Cingel, who reported that nurses who cared for older people with a chronic disease put themselves in the patients' shoes [68].

Reducing negative attitudes toward older patients: Ageist attitudes, which comprise discrimination, prejudice, and stereotypes toward a person based on their age, have been recognized as a factor influencing older adults [69,70]. Ageist attitudes can lead to age-based disparities in diagnostic procedures, decision-making, and types of treatment offered. As previously indicated, in this current study, some nurses avoided older patients because of alleged witchcraft. Additionally, some nurses shouted at older patients because they saw them as children. Moreover, ageist attitudes are reflected in interpersonal interactions that are patronizing or involve elder speak [71]. Ageism in healthcare limits older adults' access to appropriate and respectful care, and results in adverse clinical outcomes [72]. Ageist attitudes are easy to deal with because although they are social constructs historically and culturally situated, they are individually interpreted [73]. Therefore, this model advocates for nonverbal communication free of age-related bias, which is essential to high-quality, patient-centered care.

3.3.4. The Pillars to Sustain Effective Nonverbal Communication between Nurses and Older Patients

For this model, pillars refer to factors that influence effective nonverbal communication between nurses and older patients. In this paper, we only list the pillars because they have been extensively discussed in Keutchafo and Kerr [35] and Keutchafo et al. [36]. The factors that influence effective nonverbal communication in this model are summarized as nurse-related and older-patient-related factors. The nurse-related factors are awareness of nonverbal communication, personality traits, previous experience with older adults, beliefs system, love for the job and for older patients, and views on older adults. The older-patient-related factors include moods, financial situation, interpretation of nurses' nonverbal communication, and medical condition.

3.3.5. The Outcomes of the Model

This study evidenced that when nonverbal communication between nurses and older patients is effective, it yields positive outcomes. For this model, the outcomes are categorized as nurse-related, older-patient-related, and operational.

Individual-Related Outcomes

In this paper, we only describe the most cited outcomes by participants. They include better relationships between nurses and older patients, compliance with care and treatment, discovery of the unsaid, and older patient satisfaction.

Communication encompasses the verbal, the nonverbal, and any form of interaction in which messages are created and meanings are derived to influence the nurse-patient relationship [60]. Likewise, in this model, it emerges that the outcome of effective nonverbal communication is *better relationships between nurses and older patients*. Although nurses and older patients are strangers at the beginning of the relationship, they are expected to improve their relationship through positive nonverbal communication. Participants in this study reported that they avoided nurses who were always shouting. Consequently, older patients will become closer to nurses who display positive nonverbal communication; this will lead to the betterment of their relationships.

Sumijati et al. have argued that the essence of communication is relationships that can lead to changes in attitudes and behaviors [74], which in this model is referred to as *com-*

pliance with care and treatment. One of the outcomes of effective nonverbal communication with older patients is compliance with care and treatment, as described in Figure 2.

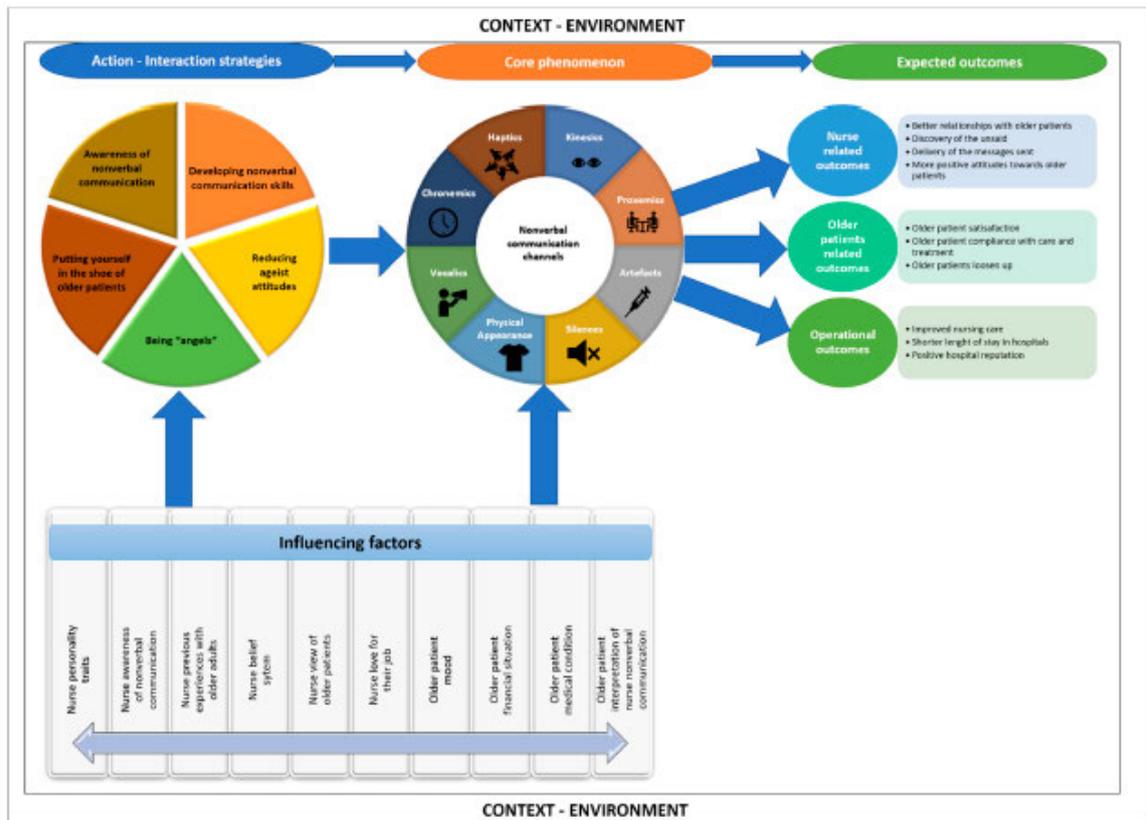


Figure 2. A model for effective nonverbal communication with older patients.

Nurses in this study reported that older patients did not want to take their medication nor accept certain care. Moreover, studies have shown that effective communication with patients leads to compliance to care and treatment [60]. As proposed in this model, older patients will be able to accept the care and treatment provided by nurses when nonverbal communication is effective.

The betterment of relationships is expected to lead to the discovery of what older patients do not express or have wrongly expressed. It has been shown that effective communication empowers patients to disclose their concerns and expectations [75], whereas patients would be less motivated to disclose their needs and feelings to nurses when they have past negative experiences in their interactions with nurses [76]. Moreover, patients need encouragement to talk about their psychological issues [77]. However, when communication is effective, older adults feel cared for, respected, and more able to describe their concerns [42]. This means that when relationships are better because of positive experiences in nonverbal communication with nurses, *nurses would discover the unsaid*. This is another important outcome in this model.

Older patient satisfaction is one of the outcomes of effective nonverbal communication. Evidence shows that nurse nonverbal positive behaviors lead to higher patient satisfaction [78]. To improve patient satisfaction, nurses are encouraged to enhance their communication skills [63]. In this model, and as confirmed by Junaid et al., to ensure

maximum satisfaction of patients, nurses should be on constant lookout of their nonverbal communication [66]. Such a level of awareness will prevent nurses from sending conflicting messages to older adults through their nonverbal communication.

Operational Outcomes

Improved nursing care is one of the hospital-related outcomes. As confirmed by Tran et al., enhancing the effectiveness of verbal and nonverbal communication can improve the quality of care [14]. Effective nonverbal communication with older patients will make room for nurses to shift from task-oriented care to person-centered care. This will improve the quality of care rendered.

When nursing care is improved, older patients will have *shorter lengths of stay in hospital*. Participants mentioned the reduction of length of stay in hospital because they viewed older patients as people who not only want to stay at home, but who also want to return home after hospitalization [79]. Moreover, studies support both a shorter or longer length of stay associated with better quality of care [80]. As nurses do not decide on the discharge or otherwise of patients, they are encouraged to use effective nonverbal communication with older patients irrespective of the length of stay.

Improved quality of care and shorter stays in hospitals will lead to a *positive reputation* for these healthcare structures according to this study's participants. In another study, hospital reputation was one of the factors influencing patients' choice of hospital in Iran [81]. In Cameroon, people can often go to a tertiary hospital without previous referral from a secondary or a primary hospital. As healthcare services in public institutions are out-of-pocket payments, these "good" hospitals will see an increase in their financing. Effective nonverbal communication with older patients goes a long way. It not only benefits individuals but hospitals and society in general. Therefore, nurses should strive to sustain effective nonverbal communication with older patients.

3.4. Relationships between Concepts

In this model, all categories and subcategories are directly or indirectly interlinked. The category "*effective nonverbal communication*" is the core category in this model. It comprises the modalities of effective nonverbal communication and its purposes, which are directly linked. For instance, one or more modalities of nonverbal communication can be used to achieve one or more purposes of nonverbal communication in one interaction between a nurse and an older patient; an affective touch coupled with physical proximity can be used to win trust in older patients. The next category is the action and interaction strategies that need to be implemented to achieve effective nonverbal communication between nurses and older adults. This category is directly linked to the core category and intervening conditions. For instance, to support verbal communication, get messages across, and convey empathy or win older adults' trust, nurses should be aware of their nonverbal behaviors, "being angels", reduce negative stereotypes about older adults, and put yourself in the shoes of older patients. This shows the links between the purposes of effective nonverbal communication, the actions that should be taken by nurses, and the intervening conditions.

Figure 1 also shows that effective nonverbal communication between nurses and older patients rests on certain pillars that are interlinked and serve together as a solid structure. This means that effective nonverbal communication relies on nurses' intrinsic factors, positive views of older adults, awareness of nonverbal communication, and nonverbal communication skills. Effective nonverbal communication also relies on older adults' related factors such as their positive moods, their non-critical medical condition, and their financial situation. The diagram also shows that nurses' effective nonverbal communication with older patients takes place within a specific context, which is the healthcare encounter. It also depends on the type of interaction between the nurse and the older patient. For instance, if the interaction is more task-related, affective nurses can use touch and sustained eye gaze to convey a positive emotion. The nonverbal communication that happens in a particular

healthcare encounter and during a particular type of interaction is expected to yield positive results, such as older patients' compliance with care and improved nursing care, thus leading to shorter stays in hospitals and the enhanced reputations of these hospitals.

4. Limitations

Although this model of effective nonverbal communication falls under transactional models of communication, it focuses more on the role of nurses; thus, one could argue that this model is linear. Moreover, the model acknowledges that older patients also have a role to play in effective nonverbal communication between them and nurses, but emphasizes nurses as shapers of the communication. A greater number of older patients could have enriched the study findings. However, as confirmed by Hall, Longhurst, and Higginson [82] and Lam et al. [83], it was difficult to conduct research with older adults because of the lack of trust in the researcher, lack of interest in the topic, the involvement of family members, and difficulties in obtaining consent. In addition, most of the older adults could speak neither French nor English. This can be seen as a limitation. Another limitation is that the observations were overt; therefore, the proposed model relies only on participants' reports of what happened as well as interpretations of the observations made. Video recordings of interactions could have captured more details that might not have been captured by the researcher. The last limitation is that views from other healthcare workers, who also communicate nonverbally with older patients in the same settings, could have further strengthened the model.

5. Conclusions

This model adds to the body of knowledge on nonverbal communication between nurses and patients. It also answers the United Nations' call on more data on older adults from low-and-middle-income countries. This model also provides a tool to help nurses communicate more effectively with older patients who mostly rely on nonverbal communication. The improved communication with older patients is expected to improve the quality of care rendered and the reputation of clinical settings. It is therefore recommended that the model is tested, evaluated, and refined for better outcomes.

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6.2 Conclusion

This proposed model, from the participants' perspectives, presents a guide for effective nonverbal communication with older adults in hospital settings. The chapter on nurses' nonverbal communication strategies with older adults formed the core phenomenon of the model as well as the action/interaction strategies. The first chapter on the limited evidence on nonverbal communication between nurses and hospitalised older adults is part of the antecedent conditions. The chapter on older adults' interpretation of nurses' nonverbal communication, attitudes towards older adults, and conditions influencing nonverbal communication are part of the intervening conditions. These results were not forced in the model, but emerged from the participants.

CHAPTER SEVEN: OVERVIEW, RECOMMENDATIONS, AND LIMITATIONS

7.1 Introduction

This chapter provides a summary of the findings, limitations, and conclusions. It also presents recommendations with regards to nursing practice, education, as well as management, and offers suggestions for policy and further studies.

7.2 Summary of the Findings

The purpose of this study was to analyse nonverbal communication between nurses and hospitalised older adults in acute settings, to develop a model for effective nonverbal communication with hospitalised older adults in Cameroon. A mixed-methods approach underpinned by pragmatism, was used to answer the research questions. A grounded analysis of the qualitative results revealed categories that illuminated the unique context of Cameroon and that influenced nonverbal communication between nurses and hospitalised older adults. The analysis of the quantitative data shows that nursing students held slightly positive attitudes towards older adults. Overall, this report consists of seven chapters that address the research objectives. Table 7.1 presents the key findings.

Table 7.1: Key findings of the Study

Chapter	Research question	Key findings
Chapter 2 (one publication)	What is the evidence of nonverbal communication between nurses and hospitalised older adults in the existing literature?	There were limited studies conducted on nonverbal communication between nurses and hospitalised older adults compared to studies in long-term care settings. Out of the 22 included studies, only four (4) were conducted in an acute setting, and none were conducted in an African country.
Chapter 3 (one publication)	What are the nonverbal communication needs of hospitalised older adults in the selected clinical settings?	With regards to nurses' nonverbal communication, hospitalised older adults need affective touch, active listening, and kind gestures. In addition, hospitalised

		older adults needed humour, affection, and reassurance.
	What are the hospitalised older adults' interpretations of nurses' nonverbal communication in the selected clinical settings?	There were positive and negative interpretations of nurses' nonverbal communication skills and behaviours. Some nurses were seen as "angels" when they displayed positive nonverbal behaviours. Conversely, nurses were seen as difficult when they displayed negative nonverbal communication skills and behaviours.
Chapter 4 (one (1) publication)	What are the nonverbal communication behaviours and methods used by nurses to communicate with hospitalised older adults in the selected clinical settings?	Participants in this study mostly used haptics (use of touch), kinesics (body movements), proxemics (use of space and distance), and vocalics (tone of the voice) to achieve several purposes with regard to nonverbal communication.
Chapter 5 (three (3) publications)	What are the attitudes of student nurses towards older adults?	Student nurses held slightly positive attitudes towards older adults. Their attitudes were significantly correlated to their age, where they grew up, and whether they were taught nonverbal communication or not. In addition, the French version of the KOP used has proven to have moderate psychometric properties, which led to the conclusion that the French version needs revision.
Chapter 6 (two (2) publications)	What model for effective nonverbal communication between nurses and hospitalised older adults can be developed?	The proposed model shows that effective nonverbal communication with older adults can be achieved within the context and the environment of this study. While some factors can influence effective nonverbal

		communication, the action and interaction strategies described can lead to positive outcomes for the nurses, the older patients, and the healthcare structures.
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The background and the literature reviewed in Chapter one indicated that communication, as the cornerstone of every human society, sustains social life (Kiani and Ahmadi, 2019). In healthcare settings, nurses’ nonverbal communication is important to convey affective and emotional information, as well as to demonstrate respect for, and build therapeutic relationships with patients (Kee et al., 2018, Lorié et al., 2017). However, the systematic scoping review presented in Chapter two showed that there is little evidence of studies on nonverbal communication between nurses and older patients in acute settings, compared to studies conducted in long-term care structures. The scoping review also revealed that there was no study conducted in an African country, confirming that most of the evidence-based data related to older adults health needs is from populations in high-income countries (Naidoo and Van Wyk, 2019). The United Nations has called for more data on older adults from African countries since 2016 (United Nations Department of Economic and Social Affairs Population Division, 2019).

The scoping review revealed that older adults had both positive and negative interpretations of nurses’ nonverbal skills and behaviours. This finding was confirmed in Chapter three. It was revealed that some nurses were seen as “angels”, whereas others were seen as “difficult” with regard to their nonverbal communication behaviours and skills. Nurses were seen as angels when they displayed positive nonverbal behaviours like smiles and affective touch. On the other hand, nurses were seen as difficult when they displayed negative nonverbal behaviours, like shouting. While there are possibilities of misinterpretations of nonverbal communication, our study suggests that older adults’ interpretation of nonverbal communication guides better ways of communicating with them.

Chapter four described the nonverbal strategies used by nurses to communicate nonverbally with older patients. This study revealed that nurses mostly used kinesics (forms of movement of the body), haptics (use of touch), vocalics (aspects of the voice), and proxemics (use of space and distance). Some participants also mentioned humour, which has been recognised as a valuable tool for achieving a relaxed atmosphere and creating a positive relationship between

nurses and patients (Schöpf et al., 2017). The study also revealed that nurses used nonverbal communication for several purposes. These included building relationships with hospitalised older adults, winning their trust, creating a positive atmosphere, supporting verbal communication, reassuring, and conveying empathy.

Another finding from this study was related to attitudes towards older adults. Attitudes towards older adults influenced the care rendered to them (Hanson, 2014; Van Wicklin, 2020; Baes et al., 2020), thus the communication with them. Chapter five showed that student nurses held slightly positive attitudes towards older patients. This implies that they were more likely to communicate slightly more effectively with older adults. The results of the first paper suggested that the tool used to assess the students' attitudes should be examined to see if the results obtained could be improved. This was to show if the moderate results obtained could be improved or if the Kogan scale that was used, was to be revised. A paper was written in this regard and the findings revealed that the French version of the Kogan scale, used in this study, had moderate psychometric properties. Finally, the results from the first paper in Chapter five inspired the need to review papers on student attitudes towards older adults in Africa exclusively, because the understanding of older adults is mostly from high-income countries (Naidoo and Van Wyk, 2019). A protocol was published in this regard and the actual review is in progress.

Finally, Chapter six addressed the development of a model for effective nonverbal communication with older adults. Assessing factors that could affect communication is always crucial for effective communication (Webb, 2018), which is why the first manuscript in Chapter six described the factors influencing nurses' nonverbal communication, such as nurse-related factors and older patient-related factors. These results confirmed the influencing factors described in the literature (Kwame and Petrucka, 2021; Wune et al., 2020; Yazew et al., 2021; Zamanzadeh et al., 2014). The second manuscript in Chapter six presented the model itself, according to Strauss and Corbin's paradigm. The model advocates for the use of more than one strategy of nonverbal communication to effectively communicate nonverbally with hospitalised older adults. The model encourages nurses to use nonverbal communication to build relationships with hospitalised older adults and to win their trust. Consequently, effective nonverbal communication with hospitalised older adults will yield positive outcomes such as: patient satisfaction, improved nursing care, good hospital reputation, and short lengths of stay in hospitals.

7.3 Limitations of the Study

GT, as a methodology used in this study, allowed the researcher to remain faithful to what the analysis of the data suggested, rather than forcing the data into some preconceived framework (Urquhart, 2022); however the first limitation in this study was that collection of data via participant observations had possibly affected the participants' behaviours. Although other investigators have used checklists of direct observation to evaluate communication (Sprangers et al., 2015) as done in this study, video observation would have allowed for repeated review and comparative analyses, which are great strengths for comprehensive communication analysis (Williams et al., 2018). Collecting data through participant observations is the first step to entering the symbolic world of the participants, but video-recorded data requires extensive participant consent, privacy and confidentiality assurances, and large and secure storage (Williams et al., 2018).

Another limitation was related to self-reporting. While self-reporting can be a valuable data collection method, it is not without its biases and limitations such as social desirability bias, memory bias, responses bias, and interpretation bias. Therefore, to mitigate such, we used multiple data sources and methods to validate and cross-check self-reported data. And used open-ended questions. However, we did not conduct follow-up interviews with all the participants (only nine) to get a deeper understanding of participants' experiences and motivations.

The findings have provided valuable information on nurses' nonverbal communication with hospitalised older adults in acute settings in Cameroon, yet the relatively small sample size of this study was limited to volunteering staff in two public hospitals in two regions, and in the urban areas in Cameroon. Initially, the researcher also obtained permission to conduct the study in a third hospital (see annexure 14); however, data collection was prevented by the ongoing war in that region of Cameroon, which broke out in 2016. Private hospitals and other public hospitals in rural areas were not sampled. Findings from these would have contributed to the findings of this study. Most older adults go to hospitals for medical assistance because there are no formal long-term care facilities in the country (World Health Organization, 2017); therefore, this model is expected to benefit nurses working in any region in Cameroon.

A further limitation was related to the small number of hospitalised older adults included in the study. There were challenges experienced during data collection. Hall et al. (2009) and Lam et

al. (2018) confirm that it is difficult to conduct research with older adults, because of the lack of trust in the researchers, lack of interest in the topic, the involvement of family members, and the difficulties in obtaining consent, conducting interviews, and maintaining privacy. This study only included eight (8) older adults because of the above-mentioned reasons and because most of the older adults could not speak French or English. More hospitalised older adults could have enriched the findings, especially the findings related to their nonverbal communication needs.

Lastly, although the intent of this study was not to conceptualise the interrelationships of nonverbal communication and older adults care, one limitation in this study was that there was not equal participation of nurses and older adults in the interpretations of and needs for nonverbal communication. Almost all the older adults were reluctant to express their opinions related to negative interpretations of nonverbal communication. Consequently, the analysed negative interpretations stemmed mostly from nurses' perceptions. Additionally, it could have been more interesting to describe the nurses' nonverbal communication across the different phases of the nurse-patient relationship described by Peplau (1988), which are: orientation, identification, exploitation, resolution, and termination.

7.4 Recommendations

Despite the limitations of this study, the following recommendations are suggested with confidence, generated, not from a position of generalisability that characterises quantitative studies, but from the conviction based on the grounded analysis, the findings and the interpretations drawn which are a true representation of the data obtained. These recommendations are related to practice, education, policy, and research.

7.4.1 Recommendations for Practice

Based on the assumption of the proposed model, it is recommended that:

- Nurses become aware of their nonverbal communication that can send conflicting messages to hospitalised older adults when the verbal content contradicts the nonverbal messages.
- Nurses are encouraged to take into consideration older patients' nonverbal communication needs as older adults are not a homogenous group.

- Nurses use creativity, flexibility, intuition, and authenticity that are needed in effective communication to communicate nonverbally with hospitalised older adults.
- Nurses reduce any negative stereotypes of older adults that can negatively influence their nonverbal communication with hospitalised older adults.
- Nurses use more than one channel of nonverbal communication to make sure that there is effective communication with hospitalised older adults.
- Nurse use affective touch where it is appropriate, certainly not on genitals

7.4.2 Recommendations for Education

The need for care for older people continues to expand because the older population is increasing worldwide. Today's student nurses will become tomorrow's nurses, who will be providing older adults care (Hsu et al., 2019). Although communication skills training and models do not necessarily ascertain that nurses will be skilled communicators (Salmon and Young, 2011), it is, therefore, recommended that:

- A module on evidence-based nonverbal communication with hospitalised older adults with information regarding older patients' interpretations and needs of nonverbal communication is developed and integrated into nursing curricula.
- Elements of culture and religion related to older adults are included in the nonverbal communication module.
- Undergraduate nurse education supports nursing students to acquire the necessary skills to communicate with older adults while ensuring person-centred communication, through simulation and immersion role plays.
- A generic nonverbal communicative competence for nursing staff is developed, based on the proposed model for staff nurses to acquire, develop, and deepen nonverbal communication skills, which could be acquired through in-service training.

7.4.3 Recommendations for Research

The findings and the recommendations presented do not claim to present the master solution to all the issues that might influence effective nonverbal communication between nurses and hospitalised older adults in acute settings in Cameroon. Since this study is the first of its kind to be carried out in this context, every aspect of the findings can serve as indicators for deeper and more specific studies. In this line, it is recommended that:

- Similar research is conducted in private clinical settings and other regions of the country with more staff nurses and more hospitalised older patients as participants.
- An interpretive phenomenological design could have brought more insight into the lived experiences of nurses communicating with older adults. Therefore, it is recommended that future studies use other qualitative methodologies such as phenomenology or ethnography to analyse nonverbal communication between nurses and older adults.
- Future research identifies and expands the effective nonverbal communication techniques, particularly post-pandemic (COVID-19), where the meaning of nonverbal communication was disrupted.
- Researchers investigate how to adequately prepare student nurses for good communication with older adults.
- The proposed model is tested empirically, evaluated, and refined to suit the needs of the current ageing population.
- Researchers determine how nurses interpret hospitalised older adults' nonverbal communication cues in clinical settings, because the cost of missing nonverbal patient cues has implications for health outcomes, patient satisfaction, and malpractice claims (Riess and Kraft-Todd, 2014).
- Because nonverbal and verbal channels have to be considered concomitantly to understand conveyed meanings (Hall et al., 2019), future researchers should expand on both verbal and nonverbal communication to deeply understand person-centred communication with older adults in clinical settings.
- Lastly, when faces are covered, facial expressions are ambiguous. Therefore, researchers are encouraged to explore the interpretation of nonverbal communication across preventive measures, such as social distancing and the constant wearing of face masks.

7.4.4 Recommendations for the Cameroonian Government

The participants in this study, along with the World Health Organization (2017), reported that there is no long-term care setting for older adults in Cameroon. In addition, Dovie (2019) intimated that the lack of geriatric infrastructure and professional geriatric knowledge results in inadequate older adults nursing care, and thus, inadequate nonverbal communication with

them. Therefore, it is recommended to the Cameroonian government, based on what arose from the study, that:

- Existing clinical settings are improved and adapted to the needs of older adults. These improvements include: carpeted floors, raised toilet seats, sitting rooms for dining, and visiting between patients and family members.
- The training of older adults specialised nurses is expanded to more public and accredited private nursing schools.
- More older adults units in public hospitals are created to avoid mixing younger adults with older adults.
- Long-term care structures are created with trained staff and adequate structures to cater to older adults' medical needs before and after hospitalisation.
- Universal health coverage for all older adults aged 60 and above is provided so that older adults can afford medical expenses as there are currently out-of-pocket payments required to receive medical services.

7.5 Conclusion

This study has added to the limited evidence on nonverbal communication between nurses and hospitalised older adults in acute care settings. This study has also answered the United Nations' (2016) call for more data on older adults from developing countries. Furthermore, this study forges a response to the challenges that come with ageing populations.

In conclusion, this study showed that effective communication between nurses and hospitalised older adults could benefit nurses, hospitalised older patients, and the healthcare settings at large. The proposed model showed that nurses are central and responsible for effective nonverbal communication. It is hoped that the recommendations suggested will be accepted and implemented. It is recommended that more research should be conducted on nonverbal communication between nurses and patients since COVID-19 has disrupted the meaning and interpretation of nonverbal communication by implementing social distancing and the constant use of personal protective equipment (face masks) to reduce the transmission of COVID-19.

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Annexure 1: Observation Guide

Date:		Venue:			Duration:		Hospital	
Space	Object	Act	Activity	Event	Time	Actor	Goal	Feelings
		Communication around health education	Communication to elicit activities of daily living			Communication that occurs in normal social life		Communication related to tasks
Artefacts								
Chronemics								
Haptics								
Kinesics								
Proxemics								
Vocalics								
Physical appearance								
Active listening								
Silences								
Others (describe)								

Annexure 2: First Interview Guide with Older Patients in English

What does nonverbal communication mean to you?

How can you identify nonverbal messages sent by nurses if any?

How do you interpret nonverbal messages sent by nurses?

What do you need in term of nonverbal communication?

What do you need in term of communication in general?

How do you want nurses to communicate with you?

How do you describe the way nurses communicate with you?

What can be some barriers to effective communication with nurses?

Annexure 3: First Interview Guide with Patients in French

Qu'est-ce que la communication non verbale signifie pour vous?

Comment identifiez-vous les messages non verbaux envoyés par les infirmières?

Comment interprétez-vous les messages non verbaux envoyés par les infirmiers?

De quoi avez-vous besoin en terme de communication non verbale?

Qu'avez-vous besoin en terme de communication en général?

Comment voulez-vous que les infirmières communiquent avec vous?

Comment décrivez-vous la façon avec laquelle les infirmières communiquent avec vous?

Quels sont les obstacles à une communication efficace avec les infirmières?

Annexure 4: First Interview Guide with Staff Nurses in English

What does nonverbal communication mean to you?

Can you please tell me about your experience of communicating with older patients?

Can you please describe for me an occasion in which you recall using nonverbal communication with an older patient?

Explain the barriers you may have experienced in your attempt to communicate nonverbally with older patients?

Can you please explain to me how you identify the older patients' communication needs?

Can you please explain to me how you determine the effectiveness of nonverbal communication between you and the older patients?

What advice would you have for someone experiencing the phenomenon?

Is there anything else I should know about that I did not ask?

Annexure 5: First Interview Guide with Staff Nurses in French

Qu'est-ce que la communication non verbale signifie pour vous?

Pouvez-vous me parler de votre expérience de communication avec des personnes âgées hospitalisées?

Pouvez-vous me décrire une occasion où vous vous souvenez d'avoir utilisé la communication non verbale avec une personne âgée hospitalisée?

Expliquez les obstacles que vous rencontrez lorsque vous essayez de communiquer de façon non verbale avec des personnes âgées hospitalisées?

Pouvez-vous m'expliquer comment vous identifiez les besoins de communication des personnes âgées hospitalisées?

Pouvez-vous m'expliquer comment déterminer l'efficacité de la communication non verbale entre vous et les personnes âgées hospitalisées?

Quel conseil avez-vous pour quelqu'un qui aurait des difficultés à communiquer de façon non verbale avec les personnes âgées hospitalisées?

Est-ce qu'il y a autre chose que je devrais savoir sur ce que je n'ai pas abordé?

Annexure 6: KOP Scale in English

SECTION A: BACKGROUND CHARACTERISTICS OF STUDENTS

Circle the choice of response that mostly applies to you

Age (years) <20 20-24 25-29 30+

Gender M F

Year of study 2nd year 3rd year 4th year

Have you ever lived with any of your grandparents? Yes No

Where did you grow up? Rural Urban

Religion Christian Moslem African Traditional Religion

Have you ever been taught about nonverbal communication with patients? Yes No

SECTION B: ATTITUDES TOWARDS OLDER PEOPLE

Instruction: Read every statement one at a time. Then, decide how well each statement describes what you think about older people. If the statement described your response very well, then circle the number 6 indicating that you strongly agree. If the statement does not describe your response at all, then circle the number 1 indicating that you strongly disagree. If the statement described your response to some degree, then circle a number 2, 3, 4 or 5 to indicate how much you agree or disagree with the statement about your response. Please circle a single number to match your response to each statement. Please note that there is no wrong or right answer.

Most old people make excessive demands for love and reassurance. 1 2 3 4 5 6

Most old people need no more love and reassurance than anyone else. 1 2 3 4 5 6

If old people expect to be liked, their first step is to try to get rid of their irritating faults. 1 2 3 4 5 6

When you think about it, old people have the same faults as anybody else. 1 2 3 4 5 6

There are a few exceptions, but in general, most old people are pretty much alike. 1 2 3 4
5 6

It is evident that most old people are very different from one another. 1 2 3 4 5 6

You can count on finding a nice residential neighbourhood when there is a sizeable number of people living in it. 1 2 3 4 5 6

In order to maintain a nice residential neighbourhood, it would be best if too many old people did not live in it. 1 2 3 4 5 6

Most old people get set in their ways and are unable to change. 1 2 3 4 5 6

Most old people are capable of new adjustments when the situation demands it. 1 2 3 4 5
6

It would probably be better if most old people lived in residential units that also housed younger people. 1 2 3 4 5 6

It would probably be better if most old people lived in residential units with people of their own age. 1 2 3 4 5 6

Old people should have more power in business and politics. 1 2 3 4 5 6

Old people have too much power in business and politics. 1 2 3 4 5 6

Most old people tend to let their homes become shabby and unattractive. 1 2 3 4 5 6

Most old people can generally be counted on to maintain a clean, attractive home. 1 2 3 4
5 6

Most old people seem to be quite clean and neat in their personal appearance. 1 2 3 4 5
6

Most old people should be more concerned with their personal appearance: they are too untidy.
1 2 3 4 5 6

Old people spend too much time prying into the affairs of others and giving unsought advice.
1 2 3 4 5 6

Most old people tend to keep to themselves and give advice only when asked. 1 2 3 4 5
6

Most old people are irritable, grouchy, and unpleasant. 1 2 3 4 5 6

Most old people are cheerful, agreeable, and good humoured. 1 2 3 4 5 6

There is something different about most old people: it is hard to figure out what makes them tick. 1 2 3 4 5 6

Most old people are really no different from anybody else: they're as easy to understand as younger people. 1 2 3 4 5 6

Most old people are very relaxing to be with. 1 2 3 4 5 6

Most old people make one feel ill at ease. 1 2 3 4 5 6

People grow wiser with the coming of old age. 1 2 3 4 5 6

It is foolish to claim that wisdom comes with old age. 1 2 3 4 5 6

Most old people would prefer to continue working just as long as they possibly can rather than be dependent on anybody. 1 2 3 4 5 6

Most old people would prefer to quit work as soon as pensions or their children can support them. 1 2 3 4 5 6

Most old people bore others by their insistence on talking about the "good old days." 1 2 3
4 5 6

One of the most interesting and entertaining qualities of most old people is their accounts of their past experiences. 1 2 3 4 5 6

Most old people are constantly complaining about the behaviour of the younger generation. 1
2 3 4 5 6

One seldom hears old people complaining about the behaviour of the younger generation. 1
2 3 4 5 6

Annexure 7: KOP Scale in French

SECTION A: DONNÉES DÉMOGRAPHIQUES DES ÉTUDIANTS

Veillez entourer la réponse qui correspond le plus à votre situation.

Age (années) <20 20-24 25-29 30+

Sexe Homme Femme

Année d'étude LSI 1 L 3 spécial

Avez-vous vécu avec un de vos grands-parents ou une personne âgée ? Oui Non

Dans quelle région avez-vous grandi? Au village En ville

Religion Chrétien Musulman Religion africaine

Avez-vous reçu un cours sur la communication non verbale avec les patients?

Oui Non

SECTION B: ATTITUDES ENVERS LES PERSONNES ÂGÉES

Instruction: Ce questionnaire vise à connaître les perceptions que les étudiants ont à l'égard des personnes âgées de façon générale. S'il vous plaît, encerclez sur l'échelle qui suit chaque énoncé, le chiffre correspondant à votre niveau d'accord avec cet énoncé. Il n'y a pas de bonne ou de mauvaise réponse attendue! Il suffit de répondre spontanément. Merci !

1=fortement en désaccord ; 2=en désaccord ; 3=légèrement en désaccord ; 4= légèrement en accord ; 5= en accord ; 6=fortement en accord

Il serait probablement mieux que la plupart des personnes âgées demeurent dans des quartiers résidentiels avec des personnes de leur âge. 1 2 3 4 5 6

Il serait probablement mieux que la plupart des personnes âgées demeurent dans des quartiers résidentiels où habitent également de jeunes adultes. 1 2 3 4 5 6

Il y a quelque chose de différent chez la plupart des personnes âgées : il est difficile de savoir ce qui les motive (ce qui les fait avancer). 1 2 3 4 5 6

La plupart des personnes âgées ne sont pas différentes des autres : elles sont aussi faciles à comprendre que les gens plus jeunes. 1 2 3 4 5 6

La plupart des personnes âgées sont confortables dans leurs façons de faire et sont incapables de changer. 1 2 3 4 5 6

La plupart des personnes âgées sont capables de s'adapter lorsque la situation le requiert. 1 2 3 4 5 6

La plupart des personnes âgées préféreraient quitter leur travail aussitôt que leurs pensions de retraite ou leurs enfants peuvent les soutenir. 1 2 3 4 5 6

La plupart des personnes âgées préféreraient continuer à travailler aussi longtemps que possible plutôt que d'être dépendantes de quelqu'un. 1 2 3 4 5 6

La plupart des personnes âgées ont tendance à laisser leurs maisons devenir défraîchies et peu invitantes. 1 2 3 4 5 6

On peut compter sur la plupart des personnes âgées pour maintenir une maison propre et invitante. 1 2 3 4 5 6

Il est insensé d'affirmer que la sagesse vient avec le grand âge. 1 2 3 4 5 6

Les gens deviennent plus sages en vieillissant. 1 2 3 4 5 6

Les personnes âgées ont trop de pouvoir dans les affaires et la politique. 1 2 3 4 5 6

Les personnes âgées ont trop peu de pouvoir dans les affaires et la politique. 1 2 3 4 5 6

La plupart des personnes âgées nous font sentir mal à l'aise. 1 2 3 4 5 6

La plupart des personnes âgées sont d'agréable compagnie. 1 2 3 4 5 6

La plupart des personnes âgées ennuient les autres par leur insistance à vouloir parler du « bon vieux temps ». 1 2 3 4 5 6

Une des qualités les plus intéressantes de la plupart des personnes âgées est la considération de leurs expériences passées. 1 2 3 4 5 6

La plupart des personnes âgées prennent trop de temps à se mêler des affaires des autres et à donner leurs conseils. 1 2 3 4 5 6

La plupart des personnes âgées respectent l'intimité des gens et ne donnent des conseils que lorsqu'on leur demande. 1 2 3 4 5 6

Si les personnes âgées souhaitent être appréciées, leur premier pas consiste à essayer de se débarrasser de leurs défauts irritants. 1 2 3 4 5 6

Lorsque nous y pensons, les personnes âgées ont les mêmes défauts que n'importe qui d'autre. 1 2 3 4 5 6

Afin de maintenir un quartier résidentiel agréable, il serait préférable qu'il n'y ait pas trop de personnes âgées qui y habitent. 1 2 3 4 5 6

Vous pouvez être assuré de trouver un quartier résidentiel agréable lorsqu'un nombre considérable de personnes âgées y habitent. 1 2 3 4 5 6

Il y a quelques exceptions, mais de façon générale, la plupart des personnes âgées sont à peu près toutes semblables. 1 2 3 4 5 6

Il est évident que la plupart des personnes âgées sont différentes les unes des autres. 1 2 3 4 5 6

La plupart des personnes âgées devraient être plus soucieuses de leur apparence personnelle : elles sont trop négligées. 1 2 3 4 5 6

La plupart des personnes âgées semblent avoir une apparence propre et soignée. 1 2 3 4 5 6

La plupart des personnes âgées sont irritables, grincheuses et désagréables. 1 2 3 4 5 6

La plupart des personnes âgées sont enjouées, agréables et ont un bon sens de l'humour. 1 2 3 4 5 6

La plupart des personnes âgées se plaignent constamment à propos du comportement des plus jeunes générations. 1 2 3 4 5 6

Nous entendons rarement les personnes âgées se plaindre du comportement des plus jeunes générations. 1 2 3 4 5 6

La plupart des personnes âgées font des demandes excessives pour assouvir leurs besoins d'amour et de réconfort. 1 2 3 4 5 6

La plupart des personnes âgées ne demandent pas plus d'amour et de réconfort que les autres. 1 2 3 4 5 6

Annexure 8: Translation Certificate



Translation – Interpretation
Language lessons – Various services
French - English

To:
WANKO KEUTCHAFO ESTHER LYDIE
P.O.Box: Yaoundé-CAMEROON
Tel. 680 053 784

Date: 04/10/2018

INVOICE N° 12/10 2018

Dear Madam,

Task: Translation from French to English of the following technical document:

N°	PROJECT DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
1.	Interviews' transcriptions	Page	130	XAF 5 000	650 000

TOTAL: XAF 650 000
SIX HUNDRED AND FIFTY THOUSAND
Net of taxes

PAID : XAF 650 000 (six hundred and fifty thousand)

TOTAL DUE: XAF 0 (zero)

Chief Executive Officer


Irastance E. Valery,
Traducteur Principal
Senior Translator



B.P: 11 154 Yaoundé - CAMEROON – Tel. (+237) 699 70 30 47 / 673 88 18 06 – Email: gty_valery@yahoo.com
Tax payer's N° P018100483381H RCCM : RC/YAO/2017/A/1852
Afriland account N° 10005 00005 02375921001 55

Annexure 9: Ethics Approval



23 November 2017

Ms Esther Lydie Wanko Keutchafo 214584622
School of Nursing and Public Health
Howard College Campus

Dear Ms Wanko Keutchafo

Protocol reference number: HSS/2008/017D

Project Title: An analysis of nonverbal communication between nurses and older patients in Cameroon

Full Approval – Expedited Application

In response to your application received 19 October 2017, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....
Professor Shenuka Singh (Chair)
Humanities & Social Sciences Research Ethics Committee

/pm

cc Supervisor: Dr Jane Kerr
Cc Academic Leader Research: Dr T Mashamba-Thompson
Cc School Administrator: Ms Caroline Dhanraj

Humanities & Social Sciences Research Ethics Committee

Professor Shenuka Singh (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 260 3587/83504557 Facsimile: +27 (0) 31 260 4609 Email: ximbeo@ukzn.ac.za / sovmam@ukzn.ac.za / mohunpo@ukzn.ac.za

Website: www.ukzn.ac.za

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Annexure 10: Permission to Conduct the Study from School 1

Mrs Esther WANKO

17th July, 2017



Accord
Amoussou
17/07/2017
P. Benjamin Alexandre Nkoum
Directeur ESS/UCAC

To Professor Benjamin Alexandre NKOUM
Director of the School of Health Sciences of
Catholic University of Central Africa

**RE: Request for permission
for data collection for PH.D**

Professor,

I am pleased to write to you this request pleading to conduct a research in order to fulfill the requirements for my Ph.D. My research study is the following: *Developing an evidence-informed communication training model for effective nonverbal communication between nurses and older patients in selected regions in Cameroon.* I am still working on the criterias of selection of the regions.

I kindly want to let you note that:

- The information collected from the questionnaires will solely be utilised for the purpose of my research in fulfilling the requirements for my PhD;
- No personal details of individuals shall be disclosed in any form;
- On completion of my study, a copy shall be made available.

I look forward to sharing the outcome of my study with you.

Best regards.

Esther Wanko
Esther Wanko

Annexure 11: Permission to Conduct the Study from Hospital 1

REPUBLIQUE DU CAMEROUN
Paix-Travail-Patrie
MINISTRE DE LA SANTE PUBLIQUE
SECRETARIAT GENERAL
DIRECTION HOPITAL CENTRAL YAOUNDE



REPUBLIC OF CAMEROON
Peace-Work-Fatherland
MINISTRY OF PUBLIC HEALTH
SECRETARIAT GENERAL
DIRECTORATE OF YAOUNDE CENTRAL
HOSPITAL

N° 026/DHCY

Yaounde the **10 1 FEV 2018**

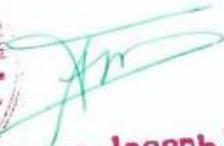
TO WHO IT MAY CONCERN

I, undersigned, **Professor FOU DA Pierre Joseph**, Director of the Yaounde Central Hospital authorizes **Esther Lydie KEUTCHAFO**, Phd Student at the University of KwaZulu-Natal, Durban, South Africa, to carry out her research titled « **An analysis of the non verbal communication between nurses and older patients in selected hospitals in Cameroon** », especially at the Yaounde Central Hospital.

This authorization is prior to the permission to conduct her research, which will be delivered by the Division of Health Operations Research (DHOR) of Ministry of Public Health in Cameroon.

This authorization is issued to serve the purpose for which it is required.

The Director



P= Pierre Joseph FOU DA

Annexure 12: Permission to Conduct the Study from Hospital 2

REPUBLICQUE DU CAMEROUN Paix – Travail – Patrie		REPUBLIC OF CAMEROON Peace – work – Fatherland
MINISTERE DE LA SANTE PUBLIQUE		MINISTRY OF PUBLIC HEALTH
SECRETARIAT GENERAL		SECRETARY GENERAL'S OFFICE
DELEGATION REGIONALE DE LA SANTE PUBLIQUE DE L'EST		EAST REGIONAL DELEGATION
BUREAU DE LA FORMATION ET DU PARTENARIAT		BUREAU OF TRAINING AND PARTNERSHIP
		Bertoua, le 7 8 AVR 2017

N° 500 /MINSANTE/SG/DRSPE/BCASS/BFP

**LE DELEGUE REGIONAL DE LA
SANTE PUBLIQUE DE L'EST**

A
**Madame WANKO KEUTCHAFO Esther
Lydie, Etudiante à l'Universté du
KWAZULU-NATAL- Afrique du Sud.**

Réf : 523/BCL du 19/04/17

Objet : Accord de principe pour autorisation
de recherche.

Madame,

J'accuse réception de votre lettre d'objet suscité ;
Y faisant suite, et pour vous donner les moyens de réaliser votre
recherche académique sous le thème : « **Une analyse du processus de
communication non verbale entre les infirmiers et les personnes âgées
hospitalisés dans les hôpitaux du Cameroun** » durant la période du 1^{er} Août 2017
au 30 décembre 2018;

J'ai l'honneur de vous signifier mon accord de principe pour que vous,
effectuez vos recherches au sein de l'Hôpital Régional de Bertoua. Toutefois vous
êtes tenue de vous conformer au respect strict de la déontologie en matière de
recherche en santé publique en vigueur au Cameroun et ce en parfaite collaboration
avec les responsables de la structure qui vous accueille.

Vous présenterez au terme de votre recherche un rapport succinct à
l'intention de madame le Directeur de l'Hôpital Régional; dans le but d'apporter votre
contribution à l'amélioration du système de communication dans le milieu hospitalier.
Parfaite collaboration.

Ampliations :

- MINSANTE
- Gouv-Est
- BCASS
- Intéressée
- Archives

LE DELEGUE REGIONAL



Annexure 13: Permission to Conduct the Study from School 2



REPUBLIQUE DU CAMEROUN
Paix – Travail – Patrie

MINISTERE DE LA SANTE PUBLIQUE

F O C A G E S
Fondation Camerounaise de Gérontologie Sociale
Département de Formation Continue
ECOLE DE SANTE St AMOUR DE DOUALA
En abrégé ESSIAD
Autorisation N°0175/D/MINSANTE/SG/DRH du 09/03/2010
Siège social : B.P. 7122 Douala-Bassa-République du Cameroun
Tél. : (237) 699 56 48 39 E-mail : focagesplus@yahoo.fr



Douala, 12th August, 2017

PERMISSION TO CARRY OUT A RESEARCH.

Dr NDZANA ALIMA Hubert, Director and founder of École de Santé St Amour de Douala, grant to Ms Esther WANKO the permission to carry out some academic researches over current and old students on the care topic : << **Developing an evidence-informed communication between nurses and older patients in selected regions in Cameroon**>>.

Finding no objections to that, the student should however respect the confidentiality of the respondents during interviews, and should put at the disposal of the school one copy of her thesis.

That being, the following permission is been delivered, so as to be useful anywhere the need shall be.

Le Directeur Fondateur

Dr Ndzana Alima H.

Accueillir

Ecouter

Positiver le Vieillessement

Annexure 14: Permission to Conduct the Study from Hospital H3

REPUBLIQUE DU CAMEROUN
Paix - Travail - Patrie

MINISTERE DE LA SANTE PUBLIQUE

DELEGATION REGIONALE DU
NORD OUEST

Tel: 233 96 92 89
Fax: 233 36 11 04

N° *404*/NWR/RDPH



REPUBLIC OF CAMEROON
Peace - Work - Fatherland

MINISTRY OF PUBLIC HEALTH

REGIONAL DELEGATION FOR THE
NORTH WEST

BAMENDA, the *26 AVR 2017*

THE REGIONAL DELEGATE
Le Délégué Régional

TO WHOM IT MAY CONCERN

Subject: **AUTHORIZATION TO CARRY OUT RESEARCH**

Esther Lydia WANKO KEUCHAFO, a PhD fellow in Nursing at the University of KwaZulu-Natal, Durban, South Africa, is authorized to carry out research at the Bamenda Regional Hospital. This study is titled "An analysis of the nonverbal communication process between nurses and older patients in selected hospitals in Cameroon". This research will be carried out from August 2017 to December 2017.

You are hereby requested to give her the support needed to achieve the objective.

This authorization is issued to serve the purpose for which it is intended.

THE REGIONAL DELEGATE OF PUBLIC HEALTH

Cc:
- Concern
- File



M. Marjo

D. Marjo Fon Mutinda
MD-MPH

Annexure 15: Information Letter to Patients in English

INFORMATION LETTER TO PATIENTS

Title: *An analysis of nonverbal communication between nurses and older patients in Cameroon.*

Supervisor: Dr Jane Kerr – School of Nursing, University of KwaZulu-Natal,

Tel: +27836269423

Email: kerrj@ukzn.ac.za

University of KwaZulu-Natal Human and Social Sciences Ethics Committee:

Mr Prem Mohun

Tel: 031 260 4557/2384

Email: HssrecHealthsciences@ukzn.ac.za

Dear Sir / Madam

I am a student at the University of KwaZulu-Natal, involved in a PhD study. The research project which I am conducting is in respect of the title indicated above and has as its purpose analysing the nonverbal communication between nurses and older patients with the intention of developing a communication model. It is believed that the information gained from this study will assist in the development of a model that will help staff nurses in their daily practice related to the nonverbal communication with older patients as well as nursing students.

You have been approached to participate in the study as you meet the criteria to participate in the study. This will involve me interviewing you and recording the interview, all this for about one hour. The recording will be transcribed into text.

Please note that your identity and any other personal information will be treated confidentially by ensuring anonymity in the reporting of any documents produced. We will ensure that your name will not be used anywhere. There will be no risk attached to your participation in the study. Your participation is voluntary, as you are free to participate or to refuse to participate at any stage during the study without any penalty. Please feel free to ask any questions you may wish to ask. My contact telephone number is 680053784.

Your contribution to this study will be highly appreciated.

I thank you for your participation.

Esther Wanko

Annexure 16: Information Letter to Patients in French

À L'ATTENTION DES PATIENTS

Titre: "*Une analyse de la communication non verbale entre infirmières et personnes âgées hospitalisées au Cameroun.*".

Supervisor: Dr. Jane Kerr – School of Nursing, University of KwaZulu-Natal,

Tel: +27836269423

Email: kerrj@ukzn.ac.za

University of KwaZulu-Natal Human and Social Sciences Ethics Committee:

Mr Prem Mohun

Tel: 031 260 4557/2384

Email: HssrecHealthsciences@ukzn.ac.za

Cher monsieur/madame,

Je suis Wanko Keutchafo Esther Lydie, infirmière, étudiante en doctorat à l'Université de KwaZulu-Natal. Le projet de recherche que je mène est relatif au titre susmentionné. Le but principal de cette étude est d'analyser le processus de communication non verbale entre les infirmières et les personnes âgées hospitalisées. Par conséquent, les informations pertinentes recueillies auprès de vous aidera au développement d'un modèle qui aidera le personnel infirmier et les étudiants à communiquer de façon non verbale avec les personnes âgées hospitalisées.

Vous avez été approché pour participer à l'étude car vous respectez les critères pour contribuer à l'étude. Cela impliquera l'observation de votre séjour à l'hôpital, et un entretien individuel avec vous. L'enregistrement de cet entretien sera transcrit en texte avant d'être analysé.

S'il vous plaît notez que les informations que vous donnerez seront strictement confidentielles et seront utilisées aux fins de la rédaction du mémoire de recherche pour répondre aux exigences du programme. Votre nom sera remplacé par des pseudonymes pour respecter la confidentialité et l'anonymat. Votre participation est volontaire et vous êtes libre de vous retirer de l'étude à tout moment et pour n'importe quelle raison. Votre refus de répondre aux questions ou de vous retirer de ce projet de recherche ne donnera en aucun cas lieu à aucune forme de discrimination ou de désavantage. Toutes les données qui seront recueillies seront utilisées pour des publications dans des revues spécialisées. Vous ne serez pas obligé de répondre aux questions pour lesquelles vous vous sentez mal à l'aise ou à celles que vous n'êtes pas disposé

à répondre pour des raisons personnelles. Il n'y aura pas de risque attaché à votre participation à cette étude. S'il vous plaît sentez-vous libre de poser toutes les questions que vous souhaiteriez poser. Mon numéro de téléphone est 680 053 784.

Votre contribution à cette étude sera très appréciée.

Je vous remercie de votre participation.

Esther Wanko

Annexure 17: Information Letter to Staff Nurses in English

INFORMATION LETTER TO STAFF NURSES

Title: *An analysis of nonverbal communication between nurses and older patients in Cameroon.*

Supervisor: Dr Jane Kerr – School of Nursing, University of KwaZulu-Natal,
Tel: +27836269423
Email: kerrj@ukzn.ac.za

University of KwaZulu-Natal Human and Social Sciences Ethics Committee:
Mr Prem Mohun
Tel: 031 260 4557/2384
Email: HssrecHealthsciences@ukzn.ac.za

Dear Sir / Madam

I am a student at the University of KwaZulu-Natal, involved in a PhD study. The research project which I am conducting is in respect of the title indicated above and has as its purpose analysing nonverbal communication between nurses and older patients. It is believed that the information gained from this study will assist in the formulation of a skills development model that will help staff nurses in their daily practice related to the nonverbal communication with older patients as well as the nursing students.

You have been approached to participate in the study as you meet the criteria to participate in the study. This will involve me observing your day-to-day activities, and recording the interview or the focus group, which will take about one hour. The recording will be transcribed into text and given back to you to verify and correct.

Please note that your identity and any other personal information will be treated confidentially by ensuring anonymity in the reporting of any documents produced. We will ensure that your name will not be used anywhere. There will be no risk attached to your participation in the study. Your participation is voluntary, as you are free to participate or to refuse participation at any stage during the study without any penalty. Please feel free to ask any questions you may wish to ask. My contact telephone number is 680053784.

Your contribution to this study will be highly appreciated.

I thank you for your participation.

Esther Wanko

Annexure 18: Information Letter to Staff Nurses in French

À L'ATTENTION DU PERSONNEL INFIRMIER

Titre: " *Une analyse de la communication non verbale entre infirmières et personnes âgées hospitalisées au Cameroun*".

Supervisor: Dr Jane Kerr – School of Nursing, University of KwaZulu-Natal,

Tel: +27836269423

Email: kerrj@ukzn.ac.za

University of KwaZulu-Natal Human and Social Sciences Ethics Committee:

Mr Prem Mohun

Tel: 031 260 4557/2384

Email: HsrecHealthsciences@ukzn.ac.za

Cher personnel infirmier,

Je suis Wanko Keutchafo Esther Lydie, infirmière, étudiante en doctorat à l'Université de KwaZulu-Natal. Le projet de recherche que je mène est relatif au titre susmentionné. Le but principal de cette étude est d'analyser le processus de communication non verbale entre les infirmières et les personnes âgées hospitalisées. Par conséquent, les informations pertinentes recueillies auprès de vous aidera au développement d'un modèle qui aidera le personnel infirmier et les étudiants à communiquer de façon non verbale avec les personnes âgées hospitalisées.

Vous avez été approché pour participer à l'étude car vous respectez les critères pour contribuer à l'étude. Cela impliquera l'observation non participative de vos activités quotidiennes, et un entretien individuel ou un groupe de discussion, qui prendra environ une heure. L'enregistrement sera transcrit en texte et vous sera retourné pour vérifier et corriger.

S'il vous plaît notez que les informations que vous donnerez seront strictement confidentielles et seront utilisées aux fins de la rédaction du mémoire de recherche pour répondre aux exigences du programme. Tous les noms de personnes et organisations seront remplacés par des pseudonymes pour respecter la confidentialité et l'anonymat. Votre participation est

volontaire et vous êtes libre de vous retirer de l'étude à tout moment et pour n'importe quelle raison. Votre refus de répondre aux questions ou de vous retirer de ce projet de recherche ne donnera en aucun cas lieu à aucune forme de discrimination ou de désavantage. Toutes les données qui seront recueillies seront utilisées pour des publications dans des revues spécialisées. Vous ne serez pas obligé de répondre aux questions pour lesquelles vous vous sentez mal à l'aise ou à celles que vous n'êtes pas disposé à répondre pour des raisons personnelles. Il n'y aura pas de risque attaché à votre participation à cette étude. S'il vous plaît sentez-vous libre de poser toutes les questions que vous souhaiteriez poser. Mon numéro de téléphone est 680 053 784.

Votre contribution à cette étude sera très appréciée.

Je vous remercie de votre participation.

Esther Wanko

Annexure 19: Informed Consent Form for Patients in English

INFORMED CONSENT FORM

I----- freely and voluntarily consent to participate in the research study titled: *An analysis of nonverbal communication between nurses and older patients in Cameroon.*

I understand that it is believed that the information gained from this study will assist in the development of a model that will help staff nurses in their daily practice related to the nonverbal communication with older patients as well as nursing students.

I understand that I am free to participate or to refuse participation at any stage during the study without any penalty or prejudice to me. I have been informed that there will be no risk attached to my participation. I have been given the right to ask questions related to the study.

I understand that the interview will be audio recorded for the purpose of a better analysis.

I have read the contents of this document with understanding and sign knowingly and consciously.

I hereby provide consent to:

Audio-record my interview YES / NO

Participant Signature

Date

FORMULAIRE DE CONSENTEMENT ÉCLAIRÉ

Je----- consent volontairement et volontairement à participer à l'étude de recherche intitulée: " *Une analyse de la communication non verbale entre infirmières et personnes âgées hospitalisées au Cameroun*".

Je comprends que l'information obtenue grâce à cette étude aidera à la formulation d'un module de développement des compétences ou d'une formation qui aidera au développement d'un modèle qui aidera le personnel infirmier et les étudiants à communiquer de façon non verbale avec les personnes âgées hospitalisées.

Je comprends que je suis libre de participer ou de refuser de participer à tout stade de l'étude sans aucune pénalité ni préjudice. Je suis informé(e) qu'il n'y aura pas de risque lié à ma participation. J'ai aussi reçu le droit de poser des questions liées à l'étude.

Je comprends que l'interview sera enregistré dans le but d'une meilleure analyse.

J'ai lu le contenu de ce document avec compréhension et signature consciencieusement et consciencieuse.

En outre, j'autorise l'enregistrement audio de l'interview individuel OUI/NON

Signature du Participant

Date

Annexure 21: Informed Consent Form for Staff Nurses in English

INFORMED CONSENT FORM

I----- freely and voluntarily consent to participate in the research study titled: *An analysis of nonverbal communication between nurses and older patients in Cameroon.*

I understand that it is believed that the information gained from this study will assist in the development of a model that will help staff nurses in their daily practice related to the nonverbal communication with older patients as well as nursing students.

I understand that I am free to participate or to refuse participation at any stage during the study without any penalty or prejudice to me. I have been informed that there will be no risk attached to my participation. I have been given the right to ask questions related to the study.

I understand that the interview or the focus group will be audio recorded for the purpose of a better analysis.

I have read the contents of this document with understanding and sign knowingly and consciously.

I hereby provide consent to:

Audio-record my interview YES / NO

Participant Signature

Date

FORMULAIRE DE CONSENTEMENT ÉCLAIRÉ

Je----- consentent volontairement et volontairement à participer à l'étude de recherche intitulée: " *Une analyse de la communication non verbale entre infirmières et personnes âgées hospitalisées au Cameroun.*"

Je comprends que l'information obtenue grâce à cette étude aidera à la formulation d'un module de développement des compétences ou d'une formation qui aidera au développement d'un modèle qui aidera le personnel infirmier et les étudiants à communiquer de façon non verbale avec les personnes âgées hospitalisées.

Je comprends que je suis libre de participer ou de refuser de participer à tout stade de l'étude sans aucune pénalité ni préjudice. Je suis informé(e) qu'il n'y aura pas de risque lié à ma participation. J'ai aussi reçu le droit de poser des questions liées à l'étude.

J'ai lu le contenu de ce document avec compréhension et signature consciencieusement et consciencieuse.

En outre, j'autorise l'enregistrement audio de l'interview individuel ou collectif OUI/NON

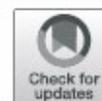
Signature du Participant

Date

PROTOCOL

Open Access

Mapping evidence of nurses' attitudes toward older adults in Africa: a scoping review protocol

Esther L. Wanko Keutchafo^{1*} , Jane Kerr¹, Mary A. Jarvis¹ and Desmond Kuupiel^{1,2}**Abstract**

Background: Culture influences nurses' attitudes towards caring for older adults. Additionally, nursing students' perceptions and attitudes towards older adults affect their behavior, possibly their career choices and/or the quality of care provided to older adults after graduation. In the context of lower–middle-income countries with a faster growing older adults population compared to upper income countries, the improvement of the quality care, inclusive of nurses' attitudes towards older adults, is one of the strategies for strengthening nursing and midwifery in Africa. Furthermore, examining nurses and nursing students' attitudes towards older adults will answer the United Nations' call for more data to understand the needs and the status of older adults in Africa.

Methods: This scoping review will be guided by Arksey and O'Malley's framework. The search will be performed using Scopus, PubMed databases, Academic search complete, CINAHL with full text, Education source, Health source: Nursing/Academic Edition, with words related to the topic. The reviewers will also use Google Scholar and the reference lists of the relevant articles. Primary studies and grey literature addressing the research question will be included. The search process will include a first stage where two reviewers will perform the title screening and the removal of duplicates, followed by a parallel abstract screening according to eligibility criteria. The second stage will involve the reading of full articles and the exclusion of articles, in accordance with the eligibility criteria. Data will be collated by two reviewers independently and parallel, using a predetermined data extraction form. Discrepancies will involve a third reviewer. The Mixed Methods Appraisal Tool, version 2018 will be used to assess the quality of the data of eligible articles. A narrative approach containing summary tables and graphs will facilitate synthesis.

Discussion: The review will provide insight into nurses' and nursing students' attitudes towards older adults in African countries. The outcomes will guide future research, practice, and education in nursing.

Keywords: Africa, Attitudes towards older adults, Nurses, Nursing students

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Background

Globally, every country is witnessing a growth in the number and proportion of older adults [1–5]. In 2019, evidence showed that older adults, aged 65 years or over, were 703 million and numbers are expected to reach 1.5 billion in 2050 worldwide [5]. In 2010 in Africa, it was estimated that older adults represented 3.6% of the population [6], with figures increased in 2019 to 32 million in sub-Saharan Africa, and projected to reach 101 million in 2050, an increase of 218% [5]. Although ageism is not a universal stigmatizing behavior, it has been reported throughout civilization, in particular among younger people [7], and have elicited stereotypes about both the reality and the circumstances of old age [8]. In Africa, relations between younger and older adults were marked by respect for the latter by the former; however, more recently, younger people are suggested to ignore or exclude older adults [2], framed within ageism [9].

Concern needs to be directed towards older adults in Africa because sub-Saharan Africa has one of the most rapidly growing older populations when compared to any other region in the world [5, 10]. Older adults play a role in securing livelihoods and contribute towards social and economic development outcomes [11]. Moreover, the older population of yesteryear will not be the same as the one of the future [12], as they will use healthcare services more frequently than the younger population [13] because their healthcare needs tend to be more complex and chronic [14]. Therefore, healthcare reforms have to take into account the resourcing of services to meet the healthcare needs of older adults [15]. The direct implication is that more healthcare workers will be required to spend more of their working time with older adults [16]. Yet, older adults require specialized nursing knowledge, skills, and attitudes, to achieve positive health outcomes and prevent a variety of geriatric syndromes [17–19]. Consequently, nurses, as the largest proportion of healthcare workers [20], should not see older adults in stereotyped ways with ageist and paternalistic attitudes [21], but should have positive attitudes towards them.

Attitudes can be viewed as the expression of beliefs, feelings, and experiences with regard to an object or concept, which are reflected through cognition and affection, and influence behaviors [22]. In relation to students, attitudes towards older adults are patterns of feeling and beliefs held either in positive or negative ways [23]. Nursing students' attitudes towards older adults and aging are likely to affect their nursing behaviors [24] and both their career choices and the quality of care provided to older adults [25–29]. Yet, gerontological nursing education can play a significant role in fostering the development of positive attitudes towards older adults [21, 30]. Therefore, the possible

identification of negative attitudes towards older adults should be a concern for nurse educators [31].

Reviews have been conducted incorporating nurses' and nursing students' attitudes towards older adults. In 2013, Liu et al. [32] conducted a systematic review on registered nurses' and nursing students' attitudes towards older adults and the potential underpinning variables reflected in studies from 2000 to 2013. Three studies conducted in African countries were reported. An Egyptian study used four different scales including an Arabic version of the Kogan's attitude towards older people (KOP) scale [33], while a Malawian study involving medical and nursing students also used the KOP scale [34]. A Nigerian study used a 30-item questionnaire developed by the researchers after an extensive literature review [35]. In 2014, Neville and Dickie [36] conducted a literature review including publications between 2008 and 2013, which aimed at evaluating undergraduate nurses' attitudes toward older adults and their perceptions of working with older adults. Only one study conducted in Malawi was reported [34]. In 2017, Hovey et al. [30] conducted an integrative review synthesizing empirical studies from 2009 to 2015 from the USA and Canada to gain an understanding of how nursing education affects nursing students' attitudes toward older adults. Although the two reviews which included African studies were done on attitudes towards older adults, they were not exclusive to African countries. The first was non-geographically specific while the second review was conducted in the USA and Canada only.

Over the years, despite a global interest in attitudes, perspectives, and perceptions of nurses' attitudes towards older adults [37], there is no study carried out to systematically review studies focused on nurses' and nursing students' attitudes towards older adults in African countries exclusively. Yet, there is a call for more data to understand the needs and the status of older adults in Africa [38] because most of the evidence-based data related to geriatric health needs are from populations in high-income countries [10]. To answer the call, this scoping review is nested in a larger study aiming at analyzing nonverbal communication between nurses and older patients to develop a model of effective nonverbal communication between nurses and older patients. Therefore, this review intends to systematically review evidence examining nurses' and nursing students' attitudes towards older adults in African countries to contribute towards bridging the gap.

Methods

A scoping review is planned instead of a systematic review because the aim of the study is to map evidence on nurses' and nursing students' attitudes towards older adults in Africa. To be specific, this review is to examine

how research is conducted on the topic, rather than to confirm or refute stereotypes of attitudes towards older adults, or to address any uncertainty or variation on how to assess attitudes towards older adults that may be occurring [39]. The study will adopt the framework proposed by Arskey and O'Malley [40] and further refined by Levac et al. [41]. In summary, the framework involves the following: identification of the research question and of the relevant studies, study selection, chart of the data, collation, summary, and report of the results. Additionally, the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines [36] was used to prepare this protocol (Additional file 1).

Identification of the research question

The research question will be what are the documented nurses' and nursing students' attitudes toward older adults in Africa? The Joanna Briggs Institute PCC (population, concept, context) mnemonic was used to determine the eligibility of the scoping review question as suggested by Peters [42]. It is illustrated below (Table 1).

Studies meeting the following elements will be included in the study:

- Studies aiming at nurses' attitudes toward older adults in African countries;
- Studies aiming at nursing students' attitudes toward older adults in African countries;

Studies with the following elements will be excluded from this study:

- Studies aiming at nurses' knowledge, perceptions, and care of older adults in African countries;
- Studies aiming at nursing students' knowledge, perceptions, and care of older adults in African countries;
- Studies with the above inclusion criteria but focusing on non-African countries.

Identification of the relevant studies

An extensive range of sources will be used to ensure comprehensive coverage of the literature. The electronic databases to search for relevant articles will include academic search complete, CINAHL with full text, Education Source, Health Source: Nursing/Academic Edition, via EBSCOhost search engine. Studies will also be searched from Web of Science, PubMed, and Google Scholar databases as well as the reference lists of the included articles to identify more relevant literature.

The search terms for this review originated from indexed subject headings, keywords of relevant studies, terms from this review protocol that recurred repetitively and the Medical Subject Headings (MeSH) terms. The string/Boolean search terms for this review will include (nurse(s) OR nursing student(s) OR student nurses OR undergraduate nurse) AND (attitudes OR perceptions OR opinions OR thoughts OR feelings OR beliefs) AND (old people OR elder OR elderly OR older people OR aged OR geriatrics OR seniors OR aged 65 or 65+). Additionally, the symbol * will be placed after the root of the search terms to broaden the search to include various word endings and spellings. Any study design will be included in the study. Quantitative studies will include randomized controlled trials, non-randomized controlled trials, quasi-experimental studies, before and after studies, analytical, and descriptive cross-sectional studies. Qualitative studies will include case studies, grounded theory, phenomenological, and ethnographic studies. Mixed methods as well as reviews and grey literature will also be included. Language limitations will be removed during the search. An initial search was performed in CINAHL with full text. The results are displayed in Table 2.

Study selection

The selection of studies will involve two stages. The first stage will involve title selection from the proposed databases by EW and JK independently to determine the eligibility of the study based on the inclusion and exclusion criteria. The identified articles will be imported to

Table 1 The population, concept, context mnemonic to identify the research question

Category	Inclusion criteria	Exclusion criteria
Population	Nurses, including nursing students	Other healthcare workers Other healthcare students Other healthcare professionals Informal caregivers
Concept	Attitudes towards older adults	Knowledge about older adults Perceptions of older adults Care of older adults
Context	African countries	Non-African countries

Table 2 Initial search

Keyword search	Date of search	Engine used	Number of articles retrieved
(attitudes or perceptions or opinions or thoughts or feelings or beliefs) AND (nursing students or student nurses or undergraduate student nurses) AND (older adults or elderly or geriatric or geriatrics or aging or senior or seniors or older people or aged 65 or 65+) Published date: 20000101-20191009 Source types: academic journals	09 October 2019	CINAHL with full text through Ebscohost	1099

Endnote X9 reference management software. Next, duplicates will be removed before EW and JK independently screen the abstracts and the full text of the eligible articles in parallel. The University librarian will be consulted to assist in locating and providing articles without full texts. Emails will be sent to authors to request for identified relevant articles where full texts are not retrievable. Should discrepancies arise between EW and JK, they will be first resolved through discussion until a consensus is reached. If no agreement is obtained, the third reviewer, MAJ will be involved and her decision will be final at both abstract screening and full-text screening stages. A French reviewer will be sought to co-screen with EW, the abstracts and the full-texts of the eligible articles published in French. A collaboration will be built, with the study University Systematic Review Unit to screen other studies that may be published in other languages apart from English and French. Additionally, although a library scientist was not involved in developing the search strategy, one will be consulted if

there is a need. All the screening will be performed using Google forms. Reasons for excluding articles will be recorded and reported. A PRISMA flow diagram summarizing the search and screening processes will be presented in the final review.

Data extraction

A draft data extraction form has been developed at this stage to aid the collection and the sorting of key information from the included studies (Table 3). Data to be extracted will include information such as author(s), year of publication, study objective, country, study design, study population, study findings, and significant outcome(s). Additionally, specific information about study samples, such as age of participants, religious and/or cultural background, and geographic context, as well as tools used to assess attitudes towards older adults will be extracted. The data extraction form will be piloted prior to its final usage to address discrepancies on a random sample of four included articles. The form will be updated continuously during this phase of the review to capture all required and relevant data based on feedback from EW and JK. The authors will be contacted for clarification, if there is any missing or inadequately reported data.

Quality assessment

All the included primary studies will be subjected to rigorous appraisal to assess the methodological quality of a study and to determine the extent to which a study addressed the possibility of bias in its design, conduct, and analysis [43] though it is not a requirement of scoping reviews [44]. For the quality appraisal, the Mixed Methods Appraisal Tool (MMAT), version 2018 [45] will be independently used by EW and JK as it is a critical appraisal tool designed to assess quality of reviews that include qualitative, quantitative, and mixed-methods studies [45]. Discussion will be used to resolve discrepancies. The MMAT will allow assessment of the appropriateness of the aim of the study, methodology, study design, participant recruitment, data collection, data analysis, and the findings presented. The quality of studies will be graded with a quality score ranging from ≤ 50% as low quality, 51–75% considered as an average quality, to 76–100% considered as high quality.

Table 3 Initial data extraction form

Bibliographic information
Author(s) and year
Article title
Country
Methodology
Study aims
Study design (quantitative, qualitative, mixed-methods)
Population (nurses or nursing students)
Sample size
Setting (nursing schools, hospitals, communities, other)
Geographic location (urban, rural, both)
Tool(s) used (when applicable)
Validity
Reliability
Total attitudes (positive, negative, or neutral)
Attitudes score
Themes described
Other relevant information
Conclusion

Collation, summary, and reporting the results

Content analysis will be employed to abstract relevant data, its meaning, and text will be summarized, manually coded into overall categories [46] independently by EW and JK. NVivo version 12 will be used to organize and manage data from the included studies. A narrative account will present the findings from existing literature discussing attitudes towards older adults, the different tools used to assess the attitudes as well as the characteristics significantly associated with the attitudes. It will be presented in a descriptive format that will seek to investigate similarities and differences between studies to explore patterns, themes, and relationships and propose explanations for findings. The results of this scoping review will be presented following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines [47].

Discussion

This study will respond to the United Nations call for more data to understand older adults in Africa [38]. Reviewing African nurses' and nursing students' attitudes towards older adults will speak to one of the global strategic directions for strengthening nursing and midwifery in Africa [14]. The results will also provide evidence-based knowledge, inform future research, and enrich the main study's findings. Characteristics associated with negative or positive attitudes towards older adults will be identified.

Owing to the fact that culture influences attitudes towards caring for older adults [24], there is a need to conduct a study on nurses' and nursing students' attitudes towards older adults in African countries. In African cultures, respect for older adults remains a notable tradition; however, due to socioeconomic and cultural changes caused by modernization and urbanization, it seems to be likely that older adults are either isolated or excluded within African societies [2]. Therefore, it is expected to find both positive and negative attitudes displayed towards older adults. It is anticipated that a follow-up study (meta-analysis) using the quantitative data obtained from this proposed scoping review will be conducted to assemble similar quantitative studies into a single estimate. Attitudes towards older adults affect career choice, behavior, and geriatric care [24, 26, 29]. Therefore, identified characteristics associated with negative attitudes will inform the modification of curricula to develop gerontological nursing in order to decrease nurses' and nursing students' misconceptions of older adults and improve their attitudes [48] or to design gerontological content and clinical experiences to foster positive attitudes towards older adults [30].

However, the reviewers anticipate some limitations, although rigorous steps will be followed throughout this

review. Firstly, studies not published in the selected databases may be omitted from the review. Secondly, other healthcare workers' attitudes towards older adults will not be described.

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s13643-021-01575-y>.

Additional file 1: Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines

Abbreviations

MMAT: Mixed methods appraisal tool; PCC: Population, concept, context; PRISMA: Preferred reporting items of systematic reviews and meta-analyses; PRISMA-ScR: Preferred reporting items for systematic reviews and meta-analyses extension for scoping reviews; WHO: World health Organization

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Authors' contributions

EW conceptualized the study under the supervision of JK and designed data extraction methods. DK contributed to the design of the methodology. EW, JK, MAJ, and DK contributed towards writing the manuscript. DK critically reviewed the protocol. All authors read and approved the final manuscript.

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Availability of data and materials

All data generated or analyzed during this study in the published scoping review will be included.

Ethics approval and consent to participate

(Not applicable)

Consent for publication

(Not applicable)

Competing interests

The authors declare that they have no competing interests.

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Annexure 24: Editing Certificate

Editing Report

Author: Esther Lydie Wanko Keutchafo (Student number 214584622)

Doctoral Supervisor: Dr Jane Kerr

Title of Thesis: An Analysis of Nonverbal Communication between Nurses and Hospitalised Older Adults in Selected Hospitals in Cameroon

Edited by: Taryn Laing Cox

MA (English) *cum laude* from University of KwaZulu Natal

Registered editor with University of Zululand

The doctoral thesis described above was a thesis by publication, so the bulk of the thesis itself consisted of research articles previously published in peer-reviewed journals (and one that was, at the time of submission, under review). The sections edited by myself were: The cover page, Declaration One, Declaration Two, Dedication, Acknowledgements, Definition of Operational Terms, Table of Contents (including List of Tables, List of Figures, List of Annexures), Prologue, Abstract, Chapters One and Seven in their entirety, and the introductions and conclusions of Chapters Two, Three, Four, Five, and Six.

The document was returned to the candidate and supervisor with numerous track changes and comments to correct spelling, grammar, and punctuation, as well as to clarify meaning. The responsibility to read through these and make final changes rests with the candidate. The final submission is, therefore, not proofread by me.

