

**PATIENT AND NURSE CONTENT PREFERENCES FOR A COMMUNICATION BOARD TO
FACILITATE DIALOGUE IN THE CRITICAL CARE UNIT**

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ABSTRACT

Objectives: The main aim of this study was to identify patient and nurse content preferences for a communication board to facilitate effective communication (dialogue) in the critical care unit.

Research design: A qualitative research design focusing on explorative and descriptive components was used to address the aim of the research study. The study employed two participant groups. Semi-structured interviews and focus group discussions were conducted with critically ill patients (N = 10) and critical care nurses (N = 30).

Setting: The study was conducted in four different private hospitals of the same hospital group in Gauteng, South Africa.

Findings: Four distinct themes were identified in the research regarding the vocabulary items that participants would like to have included.

Conclusion: The findings suggest that patients perceive a communication board to be valuable in enhancing communication in the critical care unit; that cultural and linguistic diversity should be considered; and that patients and nurses have varying opinions on topics of priority during communication.

Keywords: communication, communication board, patient, nurse, critical care unit, , focus group, preferences, private hospitals, qualitative, vocabulary

INTRODUCTION

Dialogic interaction refers to a mutual engagement between communication partners to create joint meaning during communication (Hostyn et al., 2010). Communication is the primary channel through which communication partners such as patients, healthcare professionals and patients' families communicate their needs or wants, convey their preferences, establish social closeness, apply social mannerisms and make shared decisions (Beukelman and Mirenda, 2013; Slatore et al., 2012). For patients to access these communicative functions, mutual trust has to be established between communication partners and all parties have to be open, flexible and willing to appreciate the perceptions of their partners (Kathard et al., 2015).

For dialogic interaction in critical care units to be effective and ensure appropriate care, communication partners need to be on an equal footing. Patients are often disadvantaged during reciprocal dialogic interaction in the critical care unit due to the severity of their injuries, intubation, wearing face masks, having intensive-care-related weakness or poor endurance that effect their ability to interact with nurses (Falk et al., 2019; Khalaila et al., 2011). Therefore, nurses working in critical care units typically act as primary caregivers and should create opportunities for critically ill patients to communicate (Blackstone et al., 2011; Hemsley et al., 2001; Ijssennagger et al., 2017; Jansson et al., 2019; Sizemore, 2014; Slatore et al., 2012). These communication opportunities are necessary as patients in the critical care unit often use unaided communication strategies such as eye contact, facial expressions or gestures to initiate communication. These attempts are not always acknowledged by their nurse communication partners (Happ et al., 2011; Jansson et al., 2019) or nurses misinterpret the information when the messages were not clearly communicated (Otuzoğlu and Karahan, 2014; Falk et al., 2019). Although unaided communication modes could enable patients to respond to medical information and convey basic needs or wants such as hunger and thirst, they might restrict and limit unique personal topics of conversation such as the patient's children or their partner's well-being, or their interests in books or everyday topics (Slatore et al.,

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2012). When they have to rely on unaided communication strategies, critically ill patients in critical care units do not perceive themselves as equal partners, and therefore dialogic interaction cannot be established adequately. This results in limited opportunities for creating shared meaning and trust (Kathard et al., 2015).

Even though significant challenges are present when using unaided communication (i.e. natural communication such as the use of body language and gestures), these strategies are still most frequently used by patients and nurses in the critical care unit (Broyles et al., 2012; Happ et al., 2011; Nilsen et al., 2014). Augmentative and alternative communication (AAC) strategies in critical care units could therefore be used to establish a functional dialogue between nurses and patients. These should include not only *unaided*, but also *aided* communication strategies involving low technology (e.g. paper-based communication boards) and high technology (e.g. speech-generating communication devices) (Broyles et al., 2012; Fried-Oken et al., 2015; Handberg and Voss, 2018).

The successful use of AAC strategies to assist patients with communication in critical care units has been well documented (Bradbury-Jones et al., 2013; Carruthers et al., 2017; Costello et al., 2010; Mesko et al., 2011; Patak et al., 2006; Santiago and Costello, 2013). AAC strategies could facilitate communication participation for patients with temporary or permanent communication challenges in the critical care unit (Fried-Oken et al., 2015). As such, Morris et al. (2018) suggest that all patients in the critical care unit require a form of alternative communication support strategy.

Low-technology AAC strategies support multi-modality and suggest various conversation topics and written options for communication (Fried-Oken et al., 2011; Salem and Ahmad, 2018). Based on the outcomes of a survey by McKinley and colleagues (2010) on the preferred AAC systems to be utilised in the critical care unit, a low-technology communication board has been suggested. The rationale for the use of such a board is the durability of the material, the language and literacy levels of potential patients, and its easy implementation by healthcare professionals with little training

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(Sizemore, 2014). The use of low-technology communication boards in critical care units could promote functional dialogue, as communication partners exert a greater influence on each other through joint engagement in the act of communication (Karlsen et al., 2019). Common ground is achieved during shared decision making, since the patient's perspective is being included (Walseth and Schei, 2011). The use of aided AAC strategies such as communication boards in critical care units also allows for mutual understanding through interaction, and communication is perceived as an opportunity to create meaning rather than to focus on the communication difficulties experienced by patients (Hostyn et al., 2010).

However, to ensure effective nurse-patient dialogue through the use of a low-technology communication board, appropriate vocabulary needs to be available on the board. The symbol type (either picture-based symbols with text, or text only), symbol transparency, symbol size and other components of a low-technology communication board therefore need to be investigated.

Patak and colleagues (2006) described and developed a communication board (Vidatak EZ Board™) for use in the critical care unit, based on the preferences of critically ill patients. This Vidatak EZ Board™ contains sufficient vocabulary for critically ill patients to communicate in the critical care context in developed countries such as the United States of America. Nevertheless, in South Africa – a low- to middle-income country (LMIC) – the various local languages and cultures should be considered when selecting appropriate vocabulary (Gropp et al., 2019; Johnson et al., 2016; Nortjé and Albertyn, 2015). Morris et al. (2018) suggest that a low-technology communication aid may be helpful in linguistically and culturally diverse populations. As a result, the aim of the current study was to investigate the preferences of critical care nurses and previously critically ill adult patients with regard to the content requirements of a communication board for critical care units. The outcomes were then compared with the vocabulary and other components of the Vidatak EZ Board™ developed by Patak and colleagues (2006) and how these could be appropriate within the South African context.

METHOD

The design of the current study was qualitative and focused on descriptive and exploratory components (McMillan and Schumacher, 2010). To identify the desired components, two participant groups were involved. Participant group 1 consisted of patients who had previously been critically ill and with whom retrospective, semi-structured interviews were conducted in a natural setting (in hospital or at the home of the patient). Participant group 2 comprised critical care nurses who participated in one of six focus groups.

Setting

The study was conducted in four private hospitals belonging to a specific hospital group situated in Gauteng, South Africa. These four hospitals each had two or more critical care units for medical-, surgical- and trauma-related intensive care. The different critical care nurses and previously critically ill patients were referred by healthcare professionals in the four participating hospitals. Two of the hospitals were selected owing to their demographic convenience for sampling and the other two were suggested by the research board of the specific hospital group. This suggestion was made because of the potential clinical impact this research might have on the hospital group as these hospitals service a large area and have many student nurses that may benefit from the information.

ETHICS APPROVAL

Ethics approval was obtained from the relevant authorities (GW20171135HS) and written permission was given by the research board and hospital managers of the four hospitals. No data collection procedures were initiated without prior informed consent from all participants.

PARTICIPANTS

Both the nurse participants and the patient participants were included by means of purposeful sampling. The nurse participants were included based on their English proficiency, registration with

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the South African Nursing Council (SANC) and at least one year's experience of working in a critical care unit. A total of 37 nurse participants were recruited to participate in six different focus groups in the four hospitals. Seven of the 37 nurse participants were excluded due to their inadequate experience, which led to the eventual inclusion of 30 nurse participants (Table 1).

Table 1. Nurse participants' demographic information (N=30)

Variable	N = 30
Age mean (range)	42.4 years (28-57 years)
Gender	Female (n=29) Male (n=1)
Ethnicity	African (n=19) White (n=8) Indian (n=2) Coloured (n=1)
First language	African language (n=24) English (n=3) Afrikaans (n=3)
Highest qualification	Nursing diploma (n=24) Bachelor's degree (n=3) Master's degree (n=3)
Additional critical care qualification	Yes (n=16) No (n=14)
Experience mean (range)	9.03 years (1-39 years)
Current job title	Registered nurse (n=20) Trained clinical nurse (n=5) Enrolled nurse (n=5)

The participants in the patient group were selected based on their age (18 years and older); their proficiency in English; their cognitive, motor and linguistic ability to understand and respond to interview questions; their sensory abilities (vision and hearing intact with corrections (i.e. glasses and hearing aids); and their experience of communication difficulties for at least 12 hours. The Montreal Cognitive Assessment (MoCA) was used to screen participants' suitability for this study (Nasreddine, 2005) and a score of 25 and higher was used to include patients. Initially 12

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participants were selected, but two were excluded based on their performance on the MoCA, which was less than 25. Most patients admitted to the critical care unit was due to TBI (n=3) and laryngeal cancer for which laryngectomies were scheduled (n=3). The patients admitted to the critical care unit due to a hernia (n=1) and colon cancer (n=1) were experiencing complications that lead to medically related weakness. Table 2 provides detailed biographical information of the patient participant group (N=10).

Table 2

Patient participants' demographic information (N=10)

Variable	N = 10
Age mean (range)	57.6 years (25-73 years)
Gender	Female (n=5) Male (n=5)
Ethnicity	White (n=8) Indian (n=2)
Home language	Afrikaans (n=6) English (n=3) Dutch (n=1)
Highest qualification	Grade 8-10 (n=2) Matric/Grade 12 (n=5) Diploma (n=2) Certificate (n=1)
Reason for admission to the critical care unit	Traumatic Brain Injury (n=3) Thrombosis (n=1) Hernia (n=1) Laryngeal Cancer (n=3) Colon Cancer (n=1) Cerebrovascular Incident (n=1)
Reason for communication difficulty	Medical-related weakness (n=3) Intubated (n=4) Laryngectomy (n=3)
Duration of communication difficulty: mean (range)	10.85 days (0.5 to 30 days)
MoCA score out of 30: mean (range)	29.5 (27-30)

DATA COLLECTION

Nurse participants

Based on the selection criteria for the study, six focus groups were conducted. Each group consisted of two to six nurses randomly selected by the managers of the critical care units at the participating hospitals to improve cohesiveness and compatibility of group members. The first author acted as moderator and solely monitored the different personal dynamics of the groups and adapted the discussions accordingly. For example, if one nurse dominated the group, the researcher would attempt to give each individual a speaking opportunity (Stewart and Shamdasani, 2015). The nurses were expected to participate in one of the six focus groups that were arranged to coincide with the hospitals' visiting hours or in-service training sessions. The number of focus groups was established once data saturation occurred. The focus groups did not interfere with nurses' duties and took place in the kitchen or staff room. A focus group script and a procedural checklist were used to ensure that the same procedures were followed for all the focus groups, thus ensuring procedural reliability. The sessions started with the introduction of the researcher and the programme, explanation of the purpose of the focus group, and the completion of consent forms and biographical questionnaires. Ground rules were agreed on at the beginning of the session (Naudé and Bornman, 2018). An opening move was used as a way for participants to introduce themselves. The researcher next introduced the topic to facilitate group discussion. The first question related to one word that could be used to describe patient-nurse communication. This was followed by questions related to the participants' perspectives regarding vocabulary that needs to be included on a communication board and the layout of the communication board. The participants verbally responded while the researcher wrote down their answers on a board. As part of member checking, the researcher repeated the information on the board and participants could add additional information if necessary. This process was repeated with all the questions to confirm the correctness of the data (Harper and Cole, 2012). Audio and video recordings were made of the group to assist in comprehensive data

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analysis as well as to provide a backup of data (Jewitt, 2012). The length of the focus group discussions ranged between 45 to 60 minutes.

Patient participants

Patients with a history of critical illness and who had earlier been admitted to the hospitals' critical care units were contacted by a critical care nurse who was willing to assist the researcher in recruiting patient participants. A nurse from each of the four hospitals gained informed consent from patient participants prior to the data collection procedures. Once written consent was granted, the researcher received the ten patients' details. The researcher interviewed them at least 72 hours after discharge from the critical care unit, depending on when the referral was received and on the psychological and physiological status of the participant. The interviews were conducted in a natural setting – either at the hospital or at the patient's home. The environment was prepared according to a procedural checklist, and an interview script similar to that of the nurses' focus group was used. The semi-structured, retrospective interviews lasted between 60 and 80 minutes. All interviews were audio and video recorded.

Procedures

Similar procedures were used with both patients and nurse participant groups. Initially, both participant groups were asked to suggest one word to describe patient-nurse communication. This was followed by the researcher writing down vocabulary that participants thought should be included on a communication board. The participants then conveyed their perspective on vocabulary selection to the researcher and were given a printed list of the vocabulary items included on the Vidatak EZ Board™ that had been developed by Patak and colleagues (2006). The two participant groups were required to choose on a scale from one to four (ranging from strongly disagree to strongly agree) the words that should in their opinion be included on a low-technology communication board. After providing input on the content of the vocabulary items, the patients were

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shown an example of the adult (text symbols) and paediatric (graphic symbols) Vidatak EZ Board™. They were subsequently asked to give their input on the layout and structure of the communication board and how it might be adapted (or not) for the South African context.

DATA ANALYSIS

Preparation of data

The researcher made conversational notes during the interview. The videos were transcribed verbatim by a research assistant with no background of the study. The researcher listened to 100% of the recordings, checked all transcriptions for correctness, and compared all the recordings and transcriptions for any disagreements (Heilman et al., 2008). The researcher then scored the transcriptions by assigning a 1 if no errors were observed, and a 0 if different words were used or if words were omitted. The transcriptions were divided into 40 responses according to the number of participants (i.e. 30 nurses and 10 patients, thus N = 40). The percentage agreement was calculated by dividing the sum of agreements by the number of responses, multiplied by 100. A total of 70% agreement was initially obtained between the original transcriptions and recordings, but after re-analysis of the recordings, full (100%) consensus was achieved.

Another research assistant who was not involved in the transcriptions or analysis of study data, reviewed 30% of randomly selected video footage to check for procedural reliability by completing the procedural checklist. The reviewer agreed that the researcher had followed 90% of the procedures.

Thematic analysis

Thematic analysis was used to analyse the qualitative data from the interviews and focus groups (Nowell et al., 2017). This method of analysis is flexible and aids in identifying possible themes across the data to provide information on the research question (Braun and Clarke, 2013; Nowell et

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al., 2017). The transcribers first familiarised themselves with the data so as to ensure the triangulation of results – which improves trustworthiness (Nowell et al., 2017). Data reduction methods were used to select only the data relevant for fulfilling the objectives of the study (Creswell, 2014). Initial themes were generated by two transcribers who hand-coded the raw data. Themes were then inductively identified by an independent transcriber and the second transcriber (the primary researcher) reviewed the transcripts for correctness. A theme was regarded as data that can be linked to the research question and that represents a sequence (Nowell et al., 2017). Full mutual consensus was required to include, define and name the themes.

FINDINGS

The findings are explained according to the topics identified from thematic analysis of the data obtained from both participant groups. The following themes were formulated based on the data: internal factors; pain; interpersonal factors; and external factors. The four themes are included in Table 3 and were based on the perspectives of both the nurse and patient participants.

Content of the communication board

The South African critical care nurse participants suggested a list of 147 words when requested to provide vocabulary for use during daily nurse-patient interaction in the critical care unit. Of these 147 words, a total of 59 were selected based on frequency of suggestion (two and more times) by the nurses. The patients suggested a word list of 125 words that was reduced to 52 in accordance with the frequency criteria. In total, a list of 111 words that occurred twice or more were suggested by the nurse and patient participant groups. Of these 111 words, 104 (93%) were words that appeared both on the Vidatak EZ Board™ and had been suggested by participants. The two participant groups were next required to choose – based on their perspective and on a scale from one to four (ranging from strongly disagree to strongly agree) – the words that should be included on a low-technology communication board. The provided word list was based on the vocabulary

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Table 3. Themes identified from critically ill patients' and critical care nurses' transcriptions

Main Theme	Sub-category theme	Examples of words/phrases included in the theme.
1. <i>Internal factors</i> refer to all the factors of the patient in terms of their physical and psychological components.	<i>Nutritional needs</i> refer to the patient's sensation of hunger and thirst.	"Do you want water", "I am thirsty", "I want water", "I want an ice cube", "I am hungry", "I want to eat", "I want tea", "I am on a soft diet", "I receive the same food daily", "I want different food", "I am not hungry", "I am not thirsty".
	<i>Hygiene</i> refers to the toileting and washing needs of the patient.	<u>Toileting needs:</u> "I need a bedpan", "I need to commode", "The patient needs to urinate", "I want to do number one", "I want to do number two", "The patient needs to pass urine", "The patient needs to pass stool", "I am wet", "I need the toilet", "The patient's bladder is full/not full", "Bowel exchange", "The catheter is full". <u>Washing needs:</u> "I want to wash", "I want to bath", "Infection Control", "I want to wash my hair, hands etc.", "I want to brush my hair/teeth".
	<i>Physical status</i> refers to the patient's comfort and physical requirements in the critical care unit.	<u>Patient:</u> "I want to cough", "I want to rest/relax", "I am uncomfortable/comfortable", "I can't breathe", "I feel sick", "I feel better/worse/the same", "I didn't sleep well/at all", "I feel cold", "I feel nauseous", "I am feeling warm/hot", "I am not feeling well", "I want to sleep", "I am tired", "I am itching", "I have cramps", "I feel dizzy", "I can't talk/communicate", "I am okay/fine". <u>Nurse:</u> "How did you sleep last night?", "Do you feel better?", "How are you feeling?", "How are you?", "Do you have a port?", "Are you ok/comfortable?"
	<i>Emotional status</i> refers to the emotions of patients in the critical care unit.	"I am scared", "I am worried", "I am anxious", "I am depressed", "I need reassurance", "I want to share something", "I am distressed", "I am grieving", "I am calm", "I am ok", "I am concerned", "I feel restless", "I am frustrated", "I am angry", "I am upset", "I feel unsure", "I am in shock", "I am lonely", "I feel isolated".
2. <i>Pain-related factors</i> refer to components that are related to pain.	<i>Pain-related</i> refers to the presence of pain and also the level of pain of the patient experiences.	<u>Patient:</u> "I have pain", "It is sore", "I am experiencing pain", "Please stop", "I have a headache". <u>Nurse:</u> "Do you have pain?", "How much is your pain?", "What is your pain experience?"
	<i>Body parts</i> refer to the location of pain or location that the patient requires assistance.	<u>Patient:</u> "Cover my legs", "back, headache, hair, teeth, face, bum and throat". <u>Nurse:</u> "Where is the pain?"
3. <i>Interpersonal factors</i> refer to the components identified that are important for the communication between nurses and patients.	<i>Greeting</i> refers to the nurse greeting the patient.	"Hello or good morning", "Good morning sir/ ma'am", "Morning"
	<i>Politeness</i> refers to the patient's use of socially correct terms when interacting with the nurse.	"Yes", "No", "Thank you", "Please".
	<i>Orientation</i> refers to the patient's knowledge of person, place and time.	"What time is it", "Where am I?", "What is the day/month/year?", "Is it night/day?", "What is my name?".
	<i>Questions</i> refers to possible requests that patients may have in the critical care unit.	<u>Patient:</u> "Why am I here?", "What happened?", "Please explain the procedure?", "Where is my family/wife/children?", "How is my work?", "When is the pipe coming out?", "Call my wife/children?", "Where/What/How/When/Why/Who?", "I need physio

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		<p>instructions?”. “Please provide suctioning?”, “How is the dog doing?”, “Secure the IV needle?”, “Can I go home?”, “I want my family”, “Please help me to eat”, “Do you understand?”, “What medication am I getting?”, “What is happening?”, “Am I ok?”, “Please be kind”, “Please speak louder?”, “Please repeat?”, “I need an interpreter/translator”, “I need assistance”, “Am I getting therapy?”, “I want to return to my room”, “I need a speech device”, “How is my house?”, “When is visiting time?”.</p> <p><u>Nurse</u>: “Please breathe deeply”, “Please hold your breath”, “Percussions will be administered by the physiotherapist”, “Do you agree?”, “Do you understand?”, “Are you ok?”.</p>
<p>4. <i>External factors</i> refer to the critical care environment as well as the patient's direction of assistance from family and healthcare professionals.</p>	<p><i>Assistance</i> refers to aid from the nurses.</p>	<p>“Who are you? (nurse)”, “I want to see the doctor?”, “What is the doctor’s name?”, “What can I do for myself?”, “Secure the IV needle?”, “Please reduce the noise”, “I need help to eat my food”, “I want to see the speech therapist”, “I need assistance”, “Please open/close the curtain”, “I appreciate you”, “I need assistance to walk”, “Please disconnect the machines, I want to walk”.</p>
	<p><i>Request for basic articles</i> refers to objects that the patient wants in the critical care unit.</p>	<p>“I want to write”, “I want a pen and paper”, “I want a fan”, “I want a book”, “I want a washing cloth”, “I want a toothbrush”.</p>
	<p><i>Positioning</i> refers to changes in position of the patient.</p>	<p>“Mobilise/mobility/independence”, “Can I stand on my own?”, “Turn me”, “Put the bed up/down”, “Lift my head up/down”, “Turn me left/right”, “I want to sit”, “I want to sit out of bed”, “I want to lay down”, “I want to walk”, “I want to move”, “Move me slowly”, “I am slipping down”.</p>
	<p><i>Family</i> refers to requests to see the family and questions regarding their well-being.</p>	<p>“Family”, “I want to see my family/wife/husband”, “When is visiting time?”, “Where is my family?”.</p>
	<p><i>Religion</i> refers to any religious activity or object that the patient may require.</p>	<p>Religion</p>
	<p><i>Environment</i> refers to any particular component that the patients mentioned in the critical care unit.</p>	<p>“The machines are noisy”, “The nurses are loud”, “The environment is very busy”.</p>
	<p><i>Safety</i> refers to physical changes in the patient’s conditions and objects in the critical care unit that may be a hindrance.</p>	<p>“Danger signs regarding patient’s condition”, “General patient safety considerations.”</p>
	<p><i>Residence</i> refers to any concern of the patient relating to their home.</p>	<p>“How is my dog doing?”, “How is the garden?”, “I am anxious about my home”.</p>
	<p><i>Medication</i> refers to the requirement of pain relief.</p>	<p><u>Patient</u>: “I need pain medication”, “The medication doesn’t work”, “I still have pain”.</p> <p><u>Nurse</u>: “Do you need pain medication?”, Pain control.</p>

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included on the Vidatak EZ Board™. Appendix A contains all the words prior to and after examining the Vidatak EZ Board™ – based on the preferences of the patients. The final selection of the word list for the communication board was based on what the patients preferred, as they are regarded as the key stakeholders who will be utilising the communication board.

Structure and layout of the communication board

Figure 1 shows the symbol choice of both patients and nurses regarding a low-technology communication board to be used in the critical care unit. Patients and nurses agreed that the Vidatak EZ Board™ communication board could be used in both medical and social contexts. The nurse participants particularly felt that there were too many words (text symbols) on the adult version of the Vidatak EZ Board™ and that this could cause anxiety when the patient has to read it. The majority of nurse participants (60%) were of the opinion that the paediatric (graphic symbols) Vidatak EZ Board™ with bigger symbols could rather be used for adults to specifically accommodate individuals with visual impairments. In contrast, most patient participants (70%) favoured the adult (text symbols) version of the Vidatak EZ Board™ despite the large amount of text on the board. With regard to the pain scale on the adult version of the Vidatak EZ Board™, the nurses suggested that faces instead of numbers could be included to rate the level of pain, as the numbers may confuse patients.

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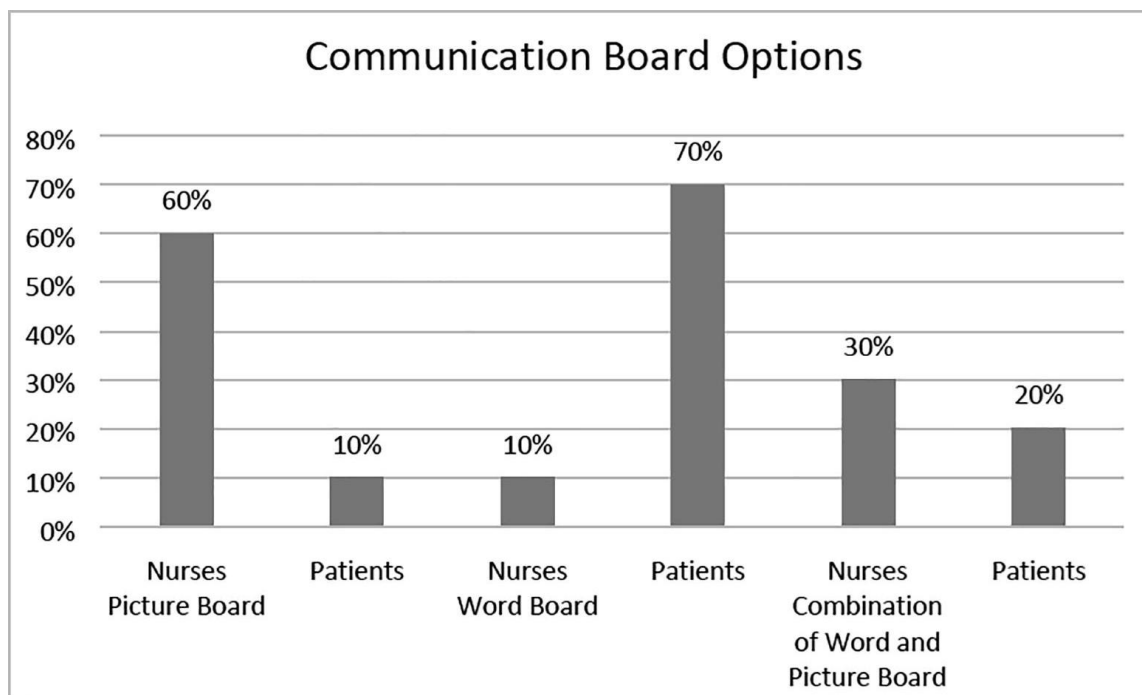


Fig. 1. Preferences of symbols on a communication board.

DISCUSSION

The aim of this study was to describe the content and layout of a communication board based on the perceptions of critically ill patients and critical care nurses situated in a LMIC context. The findings regarding the Vidatak EZ Board™ communication board are discussed next, and how they relate to dialogic interaction.

The concept of dialogic interaction as presented in this study allowed patients as well as nurses to mention the topics important to them. Both participant groups were allowed to contribute their unique perspective on the inclusion of specific vocabulary for a communication board. All agreed that orientation of the patient in respect of place and time was important. This initial finding is supported by Merilainen et al. (2013) who suggested that disorientation can cause stress for patients. Then subtle differences became apparent between the perspectives of both participant groups. For example, nurse participants were commenting on the inclusion of vocabulary related to social etiquette, such politeness (e.g. “please” and greeting) (Karlsen et al., 2019), whereas patient

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participants were more concerned about asking questions. For patients, being able to ask questions and the ability to communicate were very important, and they insisted that vocabulary such as “I can’t talk” and “I need a speech device” should be included. Some nurse participants however seemed to assume that patients do not need to communicate and that they can be effectively assisted by the nursing staff (Falk et al., 2019; Kalsen et al., 2018). This assumption could cause misunderstandings between patients and nurses in addition to existing cultural and linguistic differences. Nurses may be task-orientated and focus on the basic medical needs of patients (such as their positioning, safety, comfort, physiological status, rest, nutrition, hygiene and thermal needs), while neglecting empathetic interaction with patients (Happ et al., 2011).

The focus on basic care and the discrepancy between nurse and patient perspectives were further emphasised when nurse participants suggested that patients require vocabulary such as “I am hungry”, “water” and “I need to bath”. In contrast, patient participants were far less concerned about these components as they had received enteral feeds (Rice et al., 2011) and preferred to wash their face and hands, and not their whole body. Patients may not be concerned with body washing as nurses conduct routine bed baths in the critical care unit and may want to wash their hands and faces due to cultural or religious reasons only (Allegranzi et al., 2009).

Thirteen nurse participants did show an awareness of the emotional needs of critically ill patients, specifically of emotions such as anxiety and worry. For example, *“It is important to know the psychological status of the patient, specifically if they are scared, worried, anxious or depressed”*. Some also mentioned that patients may not only be concerned about their current prognosis but also about their family (Leung et al., 2018). This view is supported by Blackstone et al. (2015), who found that patients may be worried about a child that is ill, a disagreement with their partner or the meal plan for the evening at home. Similarly, the words that patient participants considered to be important were words describing their emotional status, such as “I am frustrated” and “I feel unsure”. Some patients were also concerned that if they slept, they might not wake up again (Engstrom et

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al., 2013; Leung et al., 2018). It is important for patients to be able to communicate these emotions and therefore the communication board of Patak et al. (2006) may prove to have merit. This lowtechnology communication board allows individuals to initiate interaction, for instance “I need reassurance” and to choose topics of conversation related to their needs. The communication board suggested by Patak et al. (2006) may increase patients’ autonomy, especially if nurses take time to practise topic selection with patients (Midtlin et al., 2014).

Expressing topics related to patient needs can also include communication about pain. In our study, all the nurse and patient participants mentioned that the ability to express pain was very important. Patak et al. (2006) address various components related to pain with their communication board, specifically the location, type and duration of pain, and the need for medication. Patient participants also mentioned that due to their communication difficulty they had challenges in obtaining assistance from nurses (Karlsen et al., 2019). This assistance was related not only to physical and emotional needs, but also included requests for basic articles such as a fan, heater, paper and pen. The pen and paper were mostly requested as this was the standard form of communication in the critical care unit for persons with adequate fine motor and language skills (Bloch and Clarke, 2013). Patak et al. (2006) allowed space on their communication board, as well as an erasible marker to write on the communication board.

Due to weakness related to their intensive-care status, some patients in our study presented with poor endurance and required another form of communication. As an example of another communication method, the English versions of both the adult (text symbols) and paediatric (graphic symbols) Vidatak EZ Board™s were shown to the patient and nurse participants. The patient participant group mostly preferred the written symbol board, as they held an optimistic perspective regarding their capabilities. However, these self-reports by patient participants were probably not a true reflection of their experience in the critical care unit, as their family members reported that they had been disorientated and confused when initially admitted. This view is supported by Barreto da

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Costa et al. (2014) who suggest that the patient's memory of the critical care unit is based on a combination of real and unreal events. The nurse participants mostly preferred the graphic symbols or a combination of graphic symbols and text on a communication board, seeing that patients from different countries, languages and cultures are admitted to the critical care unit. In the current study, nurses mentioned that using graphic symbols may be more effective than using words in a language that patients don't understand. The use of graphic symbols may also assist patients with hearing and visual impairments, or with low literacy levels (Bartlett et al., 2008; Otuzoglu and Karahan, 2014). Nurse participants also mentioned that these graphic symbols should be coloured line drawings, as patients show increased responses and were able to understand health-related communication better (Houts et al., 2006).

Family members present during the data collection for the current study also mentioned that they preferred a combination of text and graphic symbols. This emphasised the importance not only of including family members in patient-centred care (Brent et al., 2018), but also of providing vocabulary for patients to express their concerns about their family members (Leung et al., 2018). When patients are critically ill, they are often concerned about their family, work and residence (Leung et al., 2018; Mobasheri et al., 2016). The content of the communication board by Patak et al. (2006) includes vocabulary related to family but not occupational or residential topics. If patients have limited access to appropriate vocabulary and symbols representing these concepts, it may limit the discussion of these topics during dialogue between nurses and patients.

Another topic important to family members and patients that requires representation on a communication board, is spiritual beliefs (Leung et al., 2018; Slatore et al., 2012). During their stay in the critical care unit, patients in our study requested for example the presence of a religious person or prayer. This may be because patients and family members believe that a religious entity rather than medicine controls their fate (Zier et al., 2008). Patak et al. (2006) included vocabulary for a chaplain but other religions are not represented on their board. These spiritual beliefs may add to

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the diversity within the critical care unit and patients need to be able to communicate these beliefs so as to establish meaningful dialogic interactions (Bradallo et al., 2013; Kevern, 2012).

To this end, not only the content and layout of the communication board are important but also the way in which the content is represented. Based on the context, culture and language of the setting, both nurses and patients recommended word changes. For example, the patient and nurse participants recommended that “I love you” be changed to “I appreciate you”, “light-headed” be changed to “dizzy”, “physical therapist” be changed to “physiotherapist” and that “respiratory therapist” and “assistant” be removed from the board, as they are not applicable to the South African context.

For components of the communication board such as the alphabet board and certain words (e.g. “gagging” and “social worker”) no deciding factor existed in the patient group. Additional components to be added to the communication board were words such as “catheter”; “place, date, month and time”; “please”; “okay/fine”; “good morning or hello”; “move, stand or walk”; “speech therapist”; “psychologist”; “bed up or down”; and “head up or down”. Although the word lists consist mostly of verbs, nouns, adverbs and adjectives considered as content words (Dark and Balandin, 2007), function words specific to the context were also suggested (Johnson et al., 2016). This would allow the patient to compile a comprehensive message and improve their communicative competence.

From the findings in this study, it is clear that some of the content and the layout of the communication board suggested by Patak et al. (2006) may be applicable to the South African context. However, contextual factors, linguistic, spiritual and cultural diversity should be considered when selecting vocabulary and designing localised communication boards. This study emphasises the importance of providing patients with a means to contribute to dialogic interaction, specific to the LMIC context, language, culture and spiritual beliefs of the patients and nurses. The should should be to accurately portray the opinions of the nurse and patient participants and avoid misunderstandings during patient-nurse interaction. Our findings stress the fact that patients in LMIC

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need a means of expressing their uniqueness and own perspective during dialogic communication with nursing staff in the critical care unit specific to their context.

Limitations

The findings of this study may have specific limitations. The study was conducted at four private hospitals of the same hospital group in one province of South Africa. Although both the nurse and patient participants were a diverse sample, no participants from public hospitals were included which should be addressed in future research. Another recommendation would be to socially validate the word list suggested for the South African critical care unit by involving a larger sample, as definitive answers for the inclusion of some vocabulary items could not be determined in the current study. This process will aid in the compilation of a linguistically and culturally appropriate communication board specific to the South African context. A pilot study utilising a quasi-experimental design could then be undertaken to determine the success of the newly developed communication board in South African critical care units. Part of this process should include training nurses to implement the communication board with patients in the critical care unit.

CONCLUSION

This study concludes that the Vidatak EZ Board™ communication board has merit for communication in the critical care unit within LMIC. However, the context, culture, language and spiritual beliefs of patients need to be considered when using the communication board. Both patient and nurse participants perceived the communication board as helpful for critically ill patients to express their opinions, feelings and requests during interaction. This corresponds with the notion of dialogic interaction, as both nurses and patients value reciprocal interaction that may increase patient-centred care (Hostyn et al., 2010).

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Conflict of interest

No conflict of interest

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