Verbal communication with unconscious patients

Comunicação verbal com pacientes inconscientes

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Abstract

Objective: Communication with critically ill patients in intensive care settings generates specific challenges for nursing staff, and demands well-developed skills.

Methods: A study was conducted in two phases using qualitative methods to characterise and standardise verbal communication used with patients. The first phase consisted of a systematic search and content analysis of the literature concerning communication and verbal stimulation of unconscious patients.

Results: The results of the content analysis were then used in phase two and informed the development of a standardised stimulus message. There appear to be four main problem areas: basic difficulty in communicating with a patient who cannot respond; pressures of the working environment; limited knowledge about unconscious patients' needs; limited detailed knowledge of why or how to communicate with unconscious patients.

Conclusion: The stimulus developed, has been shown to facilitate the communication with the unconscious patients.

Resumo

Objetivo: A comunicação com pacientes críticos nas unidades de cuidados intensivos gera desafios para a equipe de enfermagem e demanda habilidades específicas.

Métodos: Trata-se de um estudo desenvolvido em duas etapas, por meio de métodos qualitativos, para caracterização e padronização da comunicaçao verbal utilizada com pacientes inconscientes. A primeira etapa consistiu de revisão sistemática e de análise de conteúdo da literatura disponível sobre comunicação e estimulação verbal em pacientes inconscientes.

Resultados: Os resultados da análise de conteúdo foram utilizados na segunda etapa do estudo e forneceram a base para a construção de uma mensagem padronizada de estímulo. Quatro áreas problemáticas foram identificadas: dificuldades básicas na comunicação com pacientes que não são capazes de responder, pressões do ambiente de trabalho, conhecimento limitado sobre as necessidades de pacientes insconscientes, e conhecimento detalhado limitado do porquê e de como se comunicar com pacientes insconscientes.

Conclusão: A mensagem estímulo desenvolvida pode facilitar a comunicação com pacientes inconscientes.

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Introduction

Effective communication is one of the foundations of professional nursing practice and the art of caring holistically for patients. Indeed, as nurses are the professional group that have the greatest contact with patients, ensuring their communication needs are fully met has been established as one of the most important skills of nursing.[1–3] Even with developments in technology, most health care remains firmly communication-centred. Healthcare professionals use communication strategies to give directions, offer reassurance, provide consolation, commiserate, interpret, receive information, and carry out different duties. Therefore, the more effectively and efficiently the nurse communicates, the more accomplished they will become in fulfilling their health care role. Not surprisingly then, there is a long tradition of nursing research in the area of communication, and the nurse-patient relationship.[4] Despite this breadth of evidence and acceptance of the centrality of communication to nursing practice, it has been stated that communication is both one of the most difficult aspects of a nurse's job, and one which is frequently avoided or done badly.[1] Without communication nurses, can neither assess, plan, implement, or evaluate care effectively.

Communication with critically ill patients in intensive care settings generates specific challenges for nursing staff, and demands well-developed skills. Numerous barriers to communication exist such as:[5] impaired consciousness; sedation; presence of artificial airways. Early research[6] on nurse-patient communication in intensive care showed that this aspect of care appeared to be delivered with less skill than other, more technical, aspects of care, and was directly related to patient responsiveness. One explanation offered for this phenomenon is that as patient survival is a major consideration in intensive care, communicating with the patient may become a low priority, whilst the nurse attends to the demands of highly technical equipment needed to support life and aid recovery.[1,7] Similar findings were found a decade later in the work of Turnock[8] who found that nurses neglected to provide ad-equate verbal and non-verbal communication, and Baker and Melby[2] concluded that at times verbal communication with unconscious patients was so nominal that any potential benefit to the patients would have been negligible. Whilst Elliott and Wright[9] concluded that intensive care nurses may not be reflecting and understanding the importance of communication in their practice. More recent studies[10] have shown that although intensive care nurses believe that communication is an important aspect of practice, it is sometimes viewed as 'getting in the way' particularly in a task-orientated system. The degree to which nurses initiate and engage in communication with patients still appears to be influenced by the overall responsiveness of the patient, and in unresponsive patients is often limited to a brief explanation prior to a nursing intervention.[11]

This suggests that opportunities to provide verbal stimulation to unconscious patients may be being missed by the health care professionals who spend the most time with the patient.

The opportunities for family interaction with comatose patients are often limited, and relatives often look to nursing staff for guidance on communicating. Moreover, historically, families' visits to the Intensive Care Unit (ICU) have been thought by some to precipitate detrimental changes in the patient's physiological variables such as heart rate, intracranial pressure and blood pressure.[12] This can lead to conflict between the family and ICU staff, and poor communication or being made to feel 'in the way' has been shown to be major factors in complaints and dissatisfaction with care.[13] However, no evidence exists to support the claim that having family members talk to the unconscious patient results in any harm. An often cited study by Walker, Eakesand Siebelink[14] demonstrated no negative effects associated with exposure to taped familial voices, with no significant changes being observed in in intracranial pressure (ICP), blood pressure, pulse, respiratory rate, mean arterial pressure, oxygen saturation level, or level of restlessness for any of the study participants. No experimental intervention had to be stopped because of an adverse reaction.

Other studies have confirmed no adverse effects on a patient's clinical condition due to hearing familiar voices, and positive effects noted on the level of consciousness. Jones et al.[15] examined physiological measures (pulse rate, respiratory rate, body movement, and facial movement) using four different auditory stimuli (rock music, classical music, nature sounds, and family/friend voices). The findings suggested that taped voices of family and friends consistently resulted in greater increases in arousal than did other types of taped stimuli. More recently, Puggina et al.[16] reported similar observations in a study comparing the use of two forms of auditory stimulation (a taped familial message and music). In this case the taped message by a family member was shown to be more effective as a stimulus, as measured by changes in physiological parameters. These studies suggest that unconscious patients retain a degree of perception, and encouraging a patient's family to communicate with them can provide an effective means of early stimulation using a range of modalities.[17]

Geluing[18] proposed that intensive care units should be viewed as 'early rehabilitation units' particularly in the case of unconscious patients following neuro trauma, with sensory stimulation playing a major part in this early rehabilitation. The rationale for implementing sensory stimulation interventions is to improve the patient's overall level of arousal and awareness by directly stimulating the reticular activating system.[19] Developments in neuroscience, and in particular the concept of brain plasticity provide additional support for implementing sensory stimulation in unconscious patients to promote 'rewiring' of neuronal networks.[20]

Unfortunately, many of the studies in the area of sensory stimulation of unconscious patients suffer from design weaknesses, such as non-standardised stimuli, so definitive recommendations for clinical practice are difficult to make. However, there is no evidence that auditory stimulation causes any harm, and recent developments in the field of functional neuroimaging have resulted in dramatic evidence that coma patients can hear and seemingly retain some cognitive ability, suggesting we may need to rethink our definitions.[21] Thus there is the need for continued research in this area to identify the most effective verbal stimuli to use, and develop a standardised message that may be used by nurses and family to make the most effective use of the communication that takes place.

The overall aim of this study was to systematically characterise and standardise the verbal communication that critical care nurses and families use with unconscious patients.

Methods

This study was conducted in two phases using qualitative methods. The first phase consisted of a systematic search and content analysis of the literature concerning communication and verbal stimulation of unconscious patients. The results of the content analysis were then used in phase two and informed the development of a standardised stimulus message with input from a reference group of clinical experts from the fields of nursing, speech and language therapy, and psychology.

Content analysis is a systematic and objective means of describing and quantifying phenomena, and is well-established in nursing research where it provides a means to examine and understand communication.[22]

A systematic search was used to provide the literature that would be used in the content analysis process using electronic databases: Medline, CINAHL and the Cochrane Library. Citations were followed up in reference lists for key citations. Key current texts were hand searched and relevant previously unidentified sources were followed-up to capture literature not published in academic journals. Included in the review was literature addressing verbal communication with unconscious patients. Only the literature that was pertinent to health professionals and unconscious patients' relatives was selected. This selection process revealed fourteen papers.

Content analysis of the fourteen selected papers about verbal communication with unconscious patients was then performed. A single researcher read through each paper several times to become fully immersed in the literature. Each paper was thensystematically examined to highlight the overall thematic areas, and their relative frequencies. The overall themes were then further scrutinised to allow the emergence of the categories and sub-categories.[23] The results of the content analysis were used to construct a standardised stimulus message that could be used in a subsequent study. This initial message was presented to a local reference group of experts (nurses, speech and language therapists and psychologists) recruited from the staff of the University of Aveiro, which enabled further refinement.

All data were analysed by one researcher, thus promoting a consistent approach to data analysis. The data were analysed manually using the framework approach,[24,25] which entailed combining pre-established themes with themes from the data to develop a coding framework. Applying this validated and systematic approach promoted rigour, which was further enhanced by critical review by independent researchers throughout the analysis process. Thus, the verbal communication of critical care nurses and patients' families, as reported in the literature, was thoroughly analysed, including references related to verbal communication by the patients' family and intensive care nurses.

The reading of the selected papers was followed by the analysis of each one using thematic content analysis.[24,25] As with other qualitative research methods, analysis involved abstracting salient features from the immense detail of raw data. Re-reading, clustering and condensing the data lead to the emergence of a number of sub-categories and categories.

The thematic areas relevant for the study were identified as being: a) Advantages of verbal communication with the unconscious patients; b) Responses of unconscious patients to verbal communication; c) Purpose of verbal communication by nurses; d) Purpose of verbal communication by patients' families.

The data were first reduced to *significant statements* (phrases or sentences relating to verbal communication with unconscious patients). With a highlighter all the descriptions that are relevant to the topic of inquiry were marked, according to the thematic areas for *relevant descriptions.*

From the highlighted areas, each distinct unit of meaning was marked. Meaning units are separated by a break or change in meaning (in this process we had to be sure to retain all information relevant to understanding the meaning unit). The units were cut out and the similar units were stacked according to the thematic areas. Each unit was coded, with the author name, date of the paper and number of the page. Similar units and initially labelled categories in each thematic were then grouped, using keywords or phrases copied from highlighted texts. All meaning units per category were read through and units redistributed as appropriate. The categories were re-labelled and collapsed or subdivided in sub-categories as appropriate. After a few days, the meaning units, categories and sub-categories were re-read and the units redistributed as appropriate, considering carefully whether the units were too small or too large. The categories were collapsed or subdivided as appropriate. Finally, the categories and sub-categories were looked over as a whole and verified if they accurately reflected the literature review. An independent expert critical care nurse reviewed the initial interpretation of the data.

The thematic areas that were selected, attempt to justify the importance of the communication with the unconscious patients and also justify the content of the verbal communication of the intensive care nurses and the patients' relatives.

The development of the study met the national and international standards of ethics in research involving human beings.

Results

The results of the content analysis are presented in terms of the main thematic areas identified.

The thematic area with the highest number of references is the purpose of verbal communication by nurses, with 10/14 (71%) references. Thus, this thematic area is the most common in the literature about communication with the unconscious patient. The thematic area with the lowest number of references was the purpose of verbal communication by the patients' family with 5/14 (36%) references.

a) Advantages of verbal communication with the unconscious patient. In this thematic area we identified two categories: advantages for intensive care nurses and for the unconscious patient.

With regard to the first category, corresponding to 33% of the registered units, we identified the follow subcategories: therapeutic relationship; to apply the scientific methodology; feedback. The most representative was the feedback with 14%.

With regard to the second category, *for unconscious patient* (67% of the registered units), we identified the follow subcategories: to promote attention; to promote orientation; therapeutic value; to reduce the risk of psychological disorders; to reduce the anguish; to reduce the anxiety; to relax. The subcategory with the highest percentage of registered units was the therapeutic value, with 29%.

b) Responses of unconscious patients to verbal communication. In the thematic area *responses of unconscious patients to verbal communication* we identified three categories: without response (9%of the registered units); neurological alterations (19%); physiological alterations (72% - the most representative).

With regard to the first category we identified the following subcategories: unaltered physiological parameters; without response of the brainstem; without response of the patient in coma. This last one was the most representative (5% of the registered units).

In the second category, we identified three subcategories: alterations of cerebral sections; alteration of the level of consciousness and of the Glasgow coma scale score. The alterations of cerebral sections was the subcategory with the highest percentage of registered units.

In the last category we identified these subcategories: murmurs; perspiration; agitation; spasticity; to cry; P300 (neural evoked potential component of the electroencephalogram); alterations of the electroencephalogram; intracranial pressure; arterial pressure; body temperature; breathing; pulse. The subcategory *pulse* presents the highest percentage of registered units (16%).

c) Purpose of verbal communication by nurses. Six categories were identified within this thematic area: to inform (10% of the registered units); to praise (2%); to stimulate (21%); to evaluate (5%); to guide (44%); to identify with 19%.

With regard to the first category, we identified the following subcategories: about the clinical equipment; of a member of the family contact; about the clinical status. This last subcategory was the most representative.

In the category *to praise* we identified only the subcategory *body movement*.

Within the third category (*to stimulate*) we identified six subcategories: comfort; consciousness; movement; response to auditory stimulus; decreasing level of anxiety and stress; collaboration. The subcategory with the highest percentage of registered units was the *response to auditory stimulus* (8%).

With regard to the category *to evaluate* we identified only the subcategory *cerebral reflexes*. For the category *to guide*, we identified the following subcategories: daily habits; time and space; motive to be unconscious; Nurse's action. This last one was the most representative.

For the last category (*to identify*) we identified four subcategories: medicine; the member of family; nurse; coma patient. The subcategory to identify the coma patient presented the highest number of registered units.

d) Purpose of verbal communication by patients' families. With regard to the last thematic area, i.e., the *purpose of verbal communication by patients' families*, we identified four categories (similar to the categories of the previous thematic area): to stimulate (23%); to guide (18%); to inform (43%); to identify (16%).

For the first category (*to stimulate*) we identified the following subcategories: to forget the accident; to collaborate; orientation; religion belief or faith; to encourage and to tranquilise; response; recovery. This last one was the most representative.

Within the category *to guide* we identified five subcategories: group contact; contact with relatives; daily habits; time and space orientation; admission motive. The subcategories with the highest number of registered units were: contact with relatives; time and space orientation.

For the category *to inform* we identified the following subcategories: repentance; impotency feeling; clinical status; family support; religion belief and faith; clinical equipment; barrier to communication; clinical care; missing relation with the coma patient (this one was the more representative); daily living.

For the last category we identified two subcategories: to identify the relative; to identify the coma patient. The first one was the most representative.

The results of the content analysis were presented to a reference group of experts drawn from the fields of nursing, speech and language therapy, and psychology (acknowledged within this paper). The four major themes (a, b, c, d as above) and most frequent categories and subcategories within them were used to construct the format for a standardised stimulus message. The expert group proposed that the message shouldprovide an increasing degree of stimulation throughout its deployment, andit was judged important that the stimulus, should include both pleasant content (e.g.,"Your family told me they really like you and that they wish you recover quickly") and orders (e.g., "Mr./Mrs. A, I'm here to help you, come on, open your eyes. This order was thought to be more likely to provoke an exacerbated reaction in the stimulated patient.The final message consisted of three sections: i) presentation and orientation; ii) information giving; iii) functional assessment and stimulation.

i) Presentation and orientation:

The contents of this section were drawn from three of the main themes previously identified concerning advantages and purpose of verbal stimulation (a, c, d). This had the purpose of providing general introductions and orientation to space and time. This consisted of the identification of the person in coma (using their name), identification of the health professional or relative (name, profession or relationship), time orientation (day, month, day of the week and weather), space orientation (current location, bed and procedures) and presentation of the study.

ii) Information giving:

The contents of this section were also drawn from the main themes concerning the advantages and purpose of verbal stimulation (a, c, d). This increased the level of verbal stimulation and had the purpose of providing information about current affairs, information concerning the patient's family, information about daily life activities prior to coma, and information about important events.

iii) Functional assessment and stimulation:

The contents of this final section were drawn from the themes concerning the advantages, responses and nursing purpose of verbal stimulation (a, b, c). This further increased the level of verbal stimulation and provided the highest level of stimulation. The purpose of this was to assess the functional capacity of the patient and provide strong verbal stimulation. This consisted of orders to stimulate and evaluate the verbal response, the opening of eyes and the motor response.

Discussion

This study was designed with the aim of investigating the verbal communication used by critical care nurses and patients families as reported in the literature, and to construct a standardised verbal stimulus message, based on these results, that could be used in unconscious patients.

We found evidence in the literature that unconscious patients have neurological and physiological alterations with auditory stimulation,[2,9,14,16,26–29] and that most intensive care nurses acknowledge that verbal communication with unconscious patients is very important,[2,7–9] but there is still some ambiguity as to the unconscious patient's level of

awareness. Major factors influencing communication are the patient's level of consciousness, the amount of physical care being given and the presence of relatives.[2]

The evidence reviewed has resulted in conflicting findings regarding the effects of stimulation on unconscious patients. There is, however, sufficient evidence to support the assumption that increased mentation and emotional arousal may affect the unconscious patient. Evidence reported in the reviewed literature also clearly shows a correlation between the auditory stimulation and increases in arterial blood pressure, pulse rate, respiratory rate, intracranial pressure, body movement and facial movement.[14,15,29]

Searching the literature revealed there are limited studies that investigate what nurses actually say to their patients, and most empirical work is now rather dated. However, the studies that do exist suggest that intensive care nurses are not providing enough verbal communication[9] and highlight several areas of concern. Nurses tend to concentrate more on the technical aspect of their work and often fail to meet patient's psychological and social needs by insufficient and/or ineffective communication.[2] Communication with unresponsive patients is limited, relating primarily to nursing interventions about to be performed.[7] There appear to be four main problem areas: basic difficulty in communicating with a patient who cannot respond, pressures of the working environment, limited knowledge about unconscious patients' needs and limited detailed knowledge of why or how to communicate with unconscious patients.[2]

In the present study we identified four thematic areas concerning communication with unconscious patients: advantages of communication; patient responses; the purpose of communication by nurses; the purpose of communication by family members. Not surprisingly differences were found in that the purpose of verbal communication by critical care nurses, which focused on professional aspects and performing nursing interventions; and the purpose of patients' family communication, which focused on personal aspects and attempted to provide more direct stimulation to 'wake the patient'. Attention to

these themes permitted the construction of a standardised verbal message that could be used by nursing staff to maximise the effectiveness of nurse-patient communication, and as a tool to explore the patient's response to verbal stimulation in a subsequent study.

Communicating with unconscious patients continues to be a problem in intensive care settings, and opportunities to promote effective and potentially therapeutic communication strategies are being missed. There is, however, sufficient evidence to support the assumption that the unconscious patient can hear, and that verbal stimulation is effective in eliciting a response. However the inconsistencies in the literature point to the need for further detailed investigation of the effects of voice stimulation on comatose patients.

Conclusion

Results of this current study suggest that we should talk to unconscious patients, and contributes to the reflection on the practice of communication with unconscious patients, in order to sensitise nurses and other healthcare professionals to the importance of communication in the intensive care unit and contributes to improving the overall quality of care.

Collaborations
Jesus LM; Simões JFFL and Voegeli D declare that they contributed to the conception and proj-

ect, analysis and interpretation of data; writing of the article; critical revision of the intellectual content and final approval of the version to be published.

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