

VALIDATION OF A NON-VERBAL COMMUNICATION PROTOCOL FOR NURSING CONSULTATIONS WITH BLIND PEOPLE*

VALIDACIÓN DE MODELO DE COMUNICACIÓN NO VERBAL PARA LA CONSULTA DE ENFERMERÍA A PACIENTES CIEGOS

VALIDAÇÃO DE MODELO DE COMUNICAÇÃO NÃO VERBAL PARA A CONSULTA DE ENFERMAGEM A PACIENTES CEGOS

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This research is aimed at validating a non-verbal communication model for the delivery of nursing care to blind patients, in line with the theoretical framework developed by Hall. It was developed at the Health Communication Laboratory of the Nursing Department at the Federal University of Ceará, Brazil between October 2007 and June 2008. It is a methodological research due to the validation of a protocol of nonverbal communication. The Non-Verbal Communication Protocol was constructed and submitted to three communications specialists for analysis and validation of the content. To test the validity of nonverbal communication protocol the subjects were divided into two groups which contained 15 nurses and 15 blind people. The protocol was entirely developed by the authors based on literature review. The nursing consultations were subdivided into four steps, called care steps. This research concluded that the protocol is valid for application in nursing practice.

Descriptors: Communication; Nonverbal Communication; Nursing; Visually Impaired Persons.

El objetivo fue validar el modelo de comunicación no verbal para la atención de enfermería a pacientes ciegos a través del marco teórico de Hall. La investigación fue desarrollada en el Laboratorio de Comunicación en Salud, del Departamento de Enfermería, de la Universidad Federal del Ceará, entre octubre/2007 y junio/2008. El estudio es metodológico, pues validó un protocolo de comunicación no verbal. El Protocolo fue construido y sometido a tres especialistas en comunicación para análisis y validación de contenido. Para probar la validez del protocolo con los sujetos, estos fueron divididos en dos grupos con 15 enfermeros y 15 pacientes ciegos en cada. El protocolo fue desarrollado por los autores, basado en la revisión de la literatura acerca del tema. La consulta de enfermería fue dividida en cuatro etapas, llamadas de etapas de atención. La investigación concluyó que el protocolo es válido para la aplicación en la práctica de enfermería.

Descritores: Comunicación; Comunicação não Verbal; Enfermería; Personas con Daño Visual.

Objetivou-se validar modelo de comunicação não verbal para o cuidado de enfermagem a pacientes cegos utilizando-se o referencial teórico de Hall. A pesquisa foi desenvolvida no Laboratório de Comunicação em Saúde do Departamento de Enfermagem da Universidade Federal do Ceará entre outubro de 2007 e junho de 2008. O estudo caracterizou-se como metodológico visto que validou um protocolo de comunicação não verbal. O Protocolo de Comunicação Não-verbal foi construído e submetido a três especialistas em comunicação para análise e validação de conteúdo. Para testar a validade do protocolo com os sujeitos, estes foram divididos em dois grupos contendo 15 enfermeiros e 15 pacientes cegos em cada grupo. O protocolo foi desenvolvido pelos autores baseado em revisão de literatura acerca do assunto. A consulta de enfermagem foi dividida em quatro etapas, denominadas etapas de cuidado. A pesquisa concluiu que o protocolo é válido para ser aplicado na prática de enfermagem.

Descritores: Comunicação; Comunicação não Verbal; Enfermagem; Pessoas com Deficiência Visual.

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INTRODUCTION

Nursing protocols with an evidence-based approach to the integration of nursing education, research and practice are needed to ensure excellence in the nursing profession⁽¹⁻³⁾. Visual impairment affects the nurse-patient relation and creates difficulties for orientation, treatment adherence, understanding and interpretation of communication, especially for the blind. Moreover, it considerably interferes with nurse-patient communication, since sight is one of the main senses used when receiving non-verbal communication.

Although many studies have looked at non-verbal communication, literature on communication between health professionals and blind people is scarce. Like other people, the blind need health care, which is often not connected with blindness itself. Due to the lack of proper training, nursing staff face communication difficulties in the delivery of care to blind patients⁽⁴⁾.

An assessment of non-verbal communication between nurses and blind people revealed relevant data that justify the importance of this study. The main findings were the pertinence of acquiring knowledge and extending research on non-verbal communication theories; adapting the use of non-verbal communication to the type of clients attending the consultations; and studying and getting to know blind people's behavior with the goal of decoding their non-verbal signs⁽⁵⁾.

The importance of this research for nursing is also justified by the fact that communication is the base of any patient intervention, especially for patients with sensory impairments. Optimal care for these patients requires staff to have the skills to perform therapeutic communication and deliver services while minimizing communication barriers. In nursing care, conscious communication, making efforts to decode, decipher and perceive the meaning of the message the patient is sending, is fundamental⁽⁵⁻⁷⁾.

This research is aimed at validating a non-verbal communication model for the delivery of nursing care to

blind clients, in line with nonverbal communication theory⁽⁸⁾.

BACKGROUND

Non-verbal communication refers to messages sent through actions and types of human behavior rather than words, standing for the majority of the sent and received messages, through facial expressions, mannerisms, voice, posture and clothing. This type of communication takes place mainly in personal encounters. The non-verbal signs can be classified in the following way: kinesthetic, proxemic and paralinguistic. Kinesthesia studies bodily movement, while proxemics studies bodily position and spatial relationships, and paralinguistic is centered in the study of the use of voice and of vocalization. Many non-verbal kinds of behavior are interrelated in a message, once rarely a sole movement of the body, in itself, conveys a certain meaning⁽⁵⁾.

In the nursing attendance of patients, communication will act as a facilitator in order to attain the objectives of such attendance⁽⁵⁾. For that, communication should be regarded in the relationship context where it occurs as, displaced from a context, it does not make sense. Besides, the attendance should be planned according to the clientele, to each interaction and to each person in particular.

In the nursing attendance of the blind clientele, the nurse will be able to adopt in his/her practice therapeutic techniques, such as, for instance, the therapeutic use of silence, once non-verbal communication takes place in these moments as well, and the gestures expressed either by the nurse and by the blind patient validate the messages sent and received by both of them. Also in this interaction, the nurse is able to see and notices both the verbal as well as the non-verbal communication conveyed by the blind patient. However, he/she should be attentive to his/her gestural expression, once the non-verbal signs conveyed by him/her to the blind patient do not refer to what

he/she expresses verbally. As for the non-verbal signs conveyed by the blind patient, they can present a different meaning to a sighted person, as this person will depend on the social context and on the visual experience lived or not lived throughout life. This way, visual disability can pose difficulties to the relationship nurse-patient and compromise the professional's practice in what regards patient's guidance, patient's commitment to the treatment, comprehension and interpretation of communication, among others. Besides, it interferes considerably in the communication nurse-blind patient, as the sight is undoubtedly one of the main senses in receiving non-verbal communication⁽⁵⁾.

METHOD

The protocol was designed based on extant literature and existing theoretical models. This study was carried out to evaluate and validate a non-verbal communication protocol for the delivery of nursing care to blind patients. The study was developed at the Health Communication Laboratory (LabCom_Health) of the Nursing Department at Federal University of Ceará, Brazil between October 2007 and June 2008. The LabCom Health is a laboratory where experiments are carried out in various contexts of communication in health care.

This is a methodological research such as this is the validation of a protocol of nonverbal communication. The research methodology is an investigation controlled of theoretical and applied aspects of mathematics, statistics, measurement and means to gather and analyze data⁽⁹⁾.

To test the validity of nonverbal communication protocol the subjects were divided into two groups. Two groups, each of which contained 15 nurses and 15 blind people, a convenient sample were generated. The 30 nursing consultations were recorded and experts with training on how to use the model coded the interactions. The number of 30 consultations were choose because

each film be assessed on a minute. So the amount of data was sufficient to detect the effectiveness or not of the communication protocol. We analyzed 1,649 interactions for the non-trained and trained group of 1478. Both groups shared the same characteristics in terms of nurses' time since graduation and the theme about diabetes of Nursing Consultation (Nursing C). The theme diabetes was chosen because diabetes is a risk factor for visual impairment and in addition, the nurse did nursing consultation to diabetics in the Family Health Strategy in Brazil. All consultations were held at LabCom_Health. Each consultant was observed who observed them? (was observed here signify that all patients in each group was different) once with different patients. They did not have any prior interactions with these patients.

Non-Verbal Communication Protocol

The protocol, a novel model, was developed entirely by the authors based on extant literature. The nursing consultations were subdivided into four steps, called care steps. In each care step, advice is given on the nurse's actions and the action, as well as how this action could be improved, is described.

Care step 1 refers to the organization of the environment in which the nursing consultation occurs. Advice for improving this step refers to the physical environment (consultation room), which should favor contact (touch) between the nurse and the blind person and avoid any kind of physical obstacle between the communication partners. This is most easily done by placing the table at one side of the room. Chairs (one for the nurse and another for the patient/blind person) should be placed facing or next to one another and close to the table. Another chair for the blind patient's companion should be placed close to the patient. Any type of obstacle between the communication partners should be avoided. Another recommendation is to

maintain a pleasant environmental temperature, i.e. between 20°C and 25°C.

In care step 2, nurses should receive patients at the entrance of the consultation room to accompany them to the place where the consultation will take place, greet them and inform them about the location of furniture and objects. For this action, it is important for the nurses to present themselves verbally to the patients; greet them through a handshake; describe the environment and the location of the chairs they will sit on; take them to the place where they will remain for most of their consultation; inform them about nearby objects and allow patients to touch these objects to get familiar and feel more comfortable; and adopt an intimate (0 to 50 cm) or personal-proximal (50 to 80 cm) distance, which favors interaction. Communication partners should maintain the same standing or sitting posture with a view to effective communication, with the ideal position being face to face, as this facilitates communication and promotes the professional's attention during the interaction.

In care step 3, the Nursing Consultation itself, nurses should use touch to make the blind individual fully understand and validate the communication. Verbal communication will transmit the content to be addressed during the consultation. This will be validated by touch, which is considered to strengthen non-verbal communication. To develop this action, nurses should perform the nursing consultation according to the consultation registration form. Their voice volume should be appropriate to the size of the room and the distance between the speakers; during each verbal question or whenever necessary, nurses should affectively touch the blind and then remain silent to allow patients to respond calmly and effectively; they should explain that they will touch them for a physical examination; start the physical exam at the head and move down to the feet; touch will be local and therapeutic, which patients will interpret as a way to assess their physical health. Nurses should

observe facial and bodily expressions and listen attentively, as the act of listening to the other person is a non-verbal communication attitude inserted in interpersonal relations, which is essential for better understanding of the people involved in the process.

Care step 4 is the final step in the Non-Verbal Communication Model and discusses how to finalize the consultation and end communication with the patient. To develop this action, nurses should emphasize the main points addressed during the consultation, finalize the interpersonal communication by touching, getting closer, and shaking the patient's hand. To be more demonstrative, the nurse should get up, say goodbye and accompany the patient to the door.

Validation of the non-verbal communication protocol

The validation process included four phases: 1) experts analyzing the model; 2) non-trained group training for consultations; 3) trained group receiving training on how to use the Non-Verbal Communication Protocol for nursing consultations with blind people; and 4) coding analysis with three other judges.

The analysis of experts is called content analysis or analysis of the construct that aims to assess the suitability of the conduct or attributes dormant, the experts should be experts in this area were chosen⁽¹⁰⁾. Three non-verbal communication experts analyzed the protocol using protocols that was already adopted in earlier studies⁽¹⁾. Expert selection criteria⁽⁴⁾ including the presence of a convenient sample, that is nurses with a Ph.D. degree, experience in teaching, research and/or professional practice, knowledge about non-verbal communication, knowledge about instrument construction and validation, previous publication of scientific articles about the theme and agreement to participate in the research.

1) Experts analyzing the protocol

According to the authors cited above, the specialists analyzing the nurse-patient interaction protocol should give suggestions in terms of clarity, the ease of reading and understanding, the presentation of the protocol, its range, and the representativeness of the contents for nurses' technical competencies for non-verbal communication. After their assessment, the proposed modifications were incorporated, establishing agreement levels of 80% or higher as the criterion for acceptance⁽¹¹⁾. We also realize that subjectivity in this line of research never permits absolute agreement among experts.

The suggestions included in the protocol referred to range, presentation form and representativeness of the contents. Next, the second phase of the validation was started. Even after the suggestions and all of these aspects in the model had been considered, the trained group and the judges who performed the coding still presented other suggestions. They requested adding advice about the nurse's interpersonal relations with the blind. This request was included immediately after the general rules for non-verbal communication in the protocol.

2) Non-trained group

During April 2008, data were collected for the non-trained group. The nurses and blind people were contacted and consultations were scheduled. Nurses did not receive any information about the patients or how to attend to blind patients. The consultations were held inside the laboratory and data were collected by filming. No time was established for the consultations, so that nurses could determine their duration. They were expected to conduct the consultations according to their technical and scientific knowledge. They were free to care for patients as they saw fit and conducted a consultation screening with their own knowledge about diabetes.

3) Trained group

The nurses received training on how to use the Non-Verbal Communication Protocol for Nursing Consultations with blind people. They received a copy of the Non-Verbal Communication Protocol as well as a copy of the main chapters in Hall's Proxemic Theory⁽⁸⁾ and were given fifteen days to read the material. At the end of this period, the researcher joined the nurses at LabCom_Health, explained the research aims and presented the dissertation project. She also explained Hall's theory, how to provide care through communication with the blind and the Non-Verbal Communication Model itself. This meeting took eight hours. In the same period, texts were presented and discussed and simulated consultations involving pairs of nurses were held at LabCom_Health. After the training session, new consultations were scheduled, during which the Non-Verbal Communication Protocol was applied.

In both the trained and the non-trained group, data were collected through three cameras that recorded the nursing consultation between the nurse, the blind patient and the companion, when present. The nurses were free to take the time they needed for the consultation and followed the steps of the nursing consultation.

4) Consultation coding and data analysis

To code film data, three other judges were invited. These judges were a nurse, a M.Sc. student and a Ph.D. student in nursing. Their training involved reading Hall's theory⁽⁸⁾, followed by a presentation of the research, a discussion of relevant literature, and the viewing of pre-test recordings. The difference between the procedures for the training group and this group of judges was the use of pre-test recordings instructing participants on how to use the analysis instrument, which it is a 5-Likert-type scale ranging from very poor to very good. The instrument used to analyze 26

categories of non-verbal signals was explained in detail, using practical examples, showing the time to evaluate each scene and demonstrating how to fill out the instrument. The judges watched the films in the same room but did not communicate and discuss how to score each item with one another. The judges just watched and fill out the instrument. After all analyses, the data were sent to a statistician for evaluation. On average, each session took two hours. During the third and fourth training sessions for the judges, two pre-test films on the nursing consultation were presented to illustrate how it would be carried out data coding. These films demonstrated patient interactions and were used to train the judges on how to fill out the instrument. Training and data analysis sessions were held in the presence of all judges, in the same room and at the same time. The importance of the presence of all judges is important and ensures that the film is analyzed at exactly at the same time, avoiding any disagreements related to the time given to analyze the scenes.

The judges were not informed about which group (trained or non-trained) they were analyzing. The researcher stayed inside the room during the video analysis and controlled the time for each scene, pausing them each minute.

Before each analysis session, the judges reread the non-verbal communication analysis script and the Non-Verbal Communication Protocol and watched the full film to know the context of the situation. They worked in an adequate environment with proper equipment, guaranteeing uninterrupted activity. They classified the scenes into one-minute units and, if necessary, could repeat each scene twice at most. Pauses were inserted whenever they felt tired, and they classified the recordings of three consultations per time period at most.

The judges' codes were inserted in an electronic worksheet for descriptive and inferential analysis, using Statistical Package for Social Sciences (SPSS) software,

version 14.0. Absolute frequency analyses were performed through univariate tables with relative frequencies and percentages. To analyze the reliability between the variables and the nurses in the control and trial group, chi-square (χ^2) and maximum likelihood tests were used. Finally, the significance level for all inferential statistical analyses was set at .05⁽¹²⁾.

In accordance with Resolution 196/96 by the Brazilian Ministry of Health, the Ethics Committee at Federal University of Ceará approved this study (approval number 242/07) in October 2007.

RESULTS

The Non-Verbal Communication Protocol was constructed and submitted to three communications specialists for analysis and face and content validation. No mutual disagreements were found. The three specialists made different suggestions, which were accepted and included in the model.

The nurses' ages ranged from 22 to 50 years with standard deviation (SD) \pm 25 years, 24 females and 6 males. The patients' ages ranged from 19 to 44 years with SD \pm 32 years, 18 female and 12 males. Time of blindness ranged from 4 to 44 years. In one of these groups, the nurses received training (see below) on how to use the protocol.

The results in Table 1 were generated by comparing the results between the trained and non-trained groups using by Non-Verbal Communication Model after expert analysis. Each filmed consultation was divided into one-minute segments to analyze the non-verbal communication. In total, 1,649 interactions were analyzed for the non-trained group, while 1,478 interactions were analyzed for the trained group. The numbers in the tables were not added because they did not entail the total. Therefore, we preferred to leave the percentages because they are the numbers that really are analyzed between the two groups trained and non-trained.

Table 1 – Comparison of actions in care step 1(organization of the environment) between trained and non-trained groups. Fortaleza, CE, Brazil, 2008

Action*	Very bad/Bad		Regular		Good		Excellent		χ^2	<i>p</i>
	No	%	No	%	No	%	No	%		
1.Organizing environment									61.77	0.0001
Non-trained	21	46.6	12	26.7	8	17.8	4	8.9		
Trained	-	-	-	-	6	13.3	39	86.7		
2. Table position									28.54	0.0001
Non-trained	1	2.2	12	26.7	12	26.7	20	44.4		
Trained	-	-	-	-	2	4.4	43	95.6		
3. Chairs(position)									57.59	0.0001
Non-trained	12	26.6	17	37.8	12	26.7	4	8.9		
Trained	-	-	1	2.2	5	11.1	39	86.7		
4. Absence of obstacle									57.85	0.0001
Non-trained	23	51.1	13	28.9	6	13.3	3	6.7		
Trained	-	-	1	2.2	2	4.4	42	93.3		
5. Temperature									1.07	0.302
Non-trained	-	-	2	4.4	10	22.2	33	73.3		
Trained	-	-	1	2.2	6	13.3	38	84.4		

* Actions will be numerically expressed according to the non-verbal communication instrument.

According to the results shown in Table 1, the comparison of care step 1 actions between the trained and the non-trained group showed that the trained group obtained $p < .0001$ on four out of five evaluated

items, scoring $\geq 84\%$. Only “temperature” had approximately the same results in both groups. Next, Table 2 shows the comparison of care step 2 between the trained and non-trained groups.

Table 2 – Comparison of actions in care step 2 (presentation of the environment) between trained and non-trained groups. Fortaleza, CE, Brazil, 2008

Action	Very bad/Bad		Regular		Good		Excellent		χ^2	<i>p</i>
	No	%	No	%	No	%	No	%		
6. Presentation									20.15	0.0001
Non-trained	8	18.9	7	16.7	5	11.9	22	52.4		
Trained	-	-	-	-	5	11.9	40	88.9		
7. Touch with affection									22.31	0.0001
Non-trained	11	24.9	13	29.5	11	25.0	9	20.5		
Trained	3	6.6	4	8.9	7	15.6	31	68.9		
8. Describe environment									72.23	0.0001
Non-trained	27	60.0	18	40.0	-	-	-	-		
Trained	2	4.4	3	6.7	7	15.6	33	73.3		
9. Conduct the blind									38.81	0.0001
Non-trained	9	20.0	19	42.2	5	11.1	12	26.7		
Trained	-	-	1	2.2	6	13.3	38	84.4		
10. Inform about objects									65.32	0.0001
Non-trained	28	62.2	14	31.1	2	4.4	1	2.2		
Trained	3	6.7	1	2.2	7	15.6	34	75.6		
11. Adopt intimate distance									48.47	0.0001
Non-trained	11	24.4	16	35.6	12	26.7	6	13.3		
Trained	-	-	-	-	6	13.3	39	86.7		
12. Posture									11.58	0.003
Non-trained	4	8.9	9	20.0	17	37.8	15	33.3		
Trained	-	-	5	11.1	9	20.0	31	68.9		
13. Ideal position									12.92	0.002
Non-trained	1	2.2	15	33.3	21	46.7	8	17.8		
Trained	2	4.4	5	11.1	14	31.1	24	53.3		

According to the results in Table 2, when comparing the actions of care step 2 in the trained and non-trained groups, the trained group obtained excellent results ($p < .05$) on all evaluated items. Hence, a

statistically significant association was found on all actions. Next, Table 3 shows the comparison of actions in care step 3 between the trained and non-trained groups.

Table 3 – Comparison of actions taken in care step 3 (development of nursing consultations) between the trained and non-trained groups. Fortaleza, CE, Brasil, 2008

Action	Very bad/Bad		Regular		Good		Excellent		χ^2	<i>p</i>
	No	%	No	%	No	%	No	%		
14.Nursing Consultation Script										
Non-trained									5.89	0.053
Trained	-	-	6	13.3	9	20.0	30	66.7		
	-	-	1	2.2	5	11.1	39	86.7		
15. Voice volume									8.54	0.014
Non-trained	2	4.4	5	11.1	14	31.1	24	53.3		
Trained	-	-	1	2.2	8	17.8	36	80.0		
16. Touching and silencing									38.99	0.0001
Non-trained	30	66.7	14	31.1	-	-	1	2.2		
Trained	7	15.5	11	24.4	16	35.6	11	24.4		
17. Explain touch									25.13	0.0001
Non-trained	18	40.0	14	31.1	10	22.2	3	6.7		
Trained	4	8.9	7	15.6	13	28.9	21	46.7		
18. Physical exam									11.99	0.009
Non-trained	10	22.2	14	31.1	13	28.9	8	17.8		
Trained	4	8.9	11	24.4	7	15.6	23	51.1		
19.Therapeutic touch									28.5	0.0001
Non-trained	7	15.5	28	62.2	8	17.8	2	4.4		
Trained	4	8.8	7	15.6	17	37.8	17	37.8		
20. Facial expression									13.73	0.004
Non-trained	5	11.1	18	40.0	19	42.2	3	6.7		
Trained	1	2.2	7	15.6	25	55.6	12	26.7		
21.Bodily expression									16.2	0.001
Non-trained	3	6.6	20	44.4	20	44.4	2	4.4		
Trained	3	6.6	7	15.6	20	44.4	15	33.3		
22.Attentive listening									8.84	0.012
Non-trained	2	4.4	9	20.0	15	33.3	19	42.2		
Trained	-	-	2	4.4	13	28.9	30	66.7		

Table 3 shows that the trained group had excellent results ($p < .05$) compared with the non-trained group on eight out of nine evaluated items in care step 3. Only the “following the Nursing Consultation script”

item remained close to the test value, but this action still showed a strong association. Table 4 shows comparative data for actions in care step 4 between the trained and non-trained groups.

Table 4 – Comparison of actions in care step 4 (termination of nursing consultation) between the trained and non-trained groups. Fortaleza, CE, Brazil, 2008

Action	Very bad/Bad		Regular		Good		Excellent		χ^2	<i>p</i>
	N ^o	%								
23. Emphasize points									15.01	0.002
Non-trained	16	35.5	19	42.2	4	8.9	6	13.3		
Trained	7	15.6	10	22.2	14	31.1	14	31.1		
24. Finalize communication									8.42	0.015
Non-trained	5	11.1	15	33.3	9	20.0	16	35.6		
Trained	2	4.4	6	13.3	9	20.0	28	62.2		
25. Stand up									5.15	0.076
Non-trained	4	8.9	11	24.4	8	17.8	22	48.9		
Trained	1	2.2	5	11.1	9	20.0	30	66.7		
26. Say goodbye									14.11	0.0001
Non-trained	2	4.4	7	15.6	9	20.0	27	60.0		
Trained	-	-	1	2.2	2	4.4	42	93.3		

Table 4 also presents excellent results ($p < .05$) for the trained group as compared with the non-trained group on three of the four actions in care step 4. No

DISCUSSION

Care step 1 refers to the organization of the environment in developing the nursing consultation. In this step, five actions were assessed, as indicated in Table 1. The actions were organizing the environment so that the furniture favors nurse-patient contact, placing the table at one side of the room and using part of it to support the materials and record the consultation script, placing the nurse and the patient's chair facing each other and close to the table, and an absence of obstacles between communication partners and maintaining a pleasant environmental temperature were compared between the control group and the trial group. The data revealed excellent performance for the

statistically significant difference ($p > 0.05$) was found for "stand up demonstratively" between the groups.

trained group ($p = .0001$), except for temperature, where no statistically significant difference ($p > .05$) was found between groups.

As for environmental temperature, recordings alone were insufficient for the judges to know if the environment was pleasant or not. Therefore, it was agreed upon during the training that they would assess the environment as unpleasant if someone explicitly mentioned cold or heat during the recordings. In one film, the blind patient actually expressed that she was feeling cold. When she informed the nurse about her discomfort, the nurse reprogrammed the temperature of the air conditioning. In the non-trained group, two manifestations of unpleasant temperature were found,

both caused by a cold environment. On these occasions however, the nurse did not intervene at all. Despite the lack of obtained significance between the two groups, there was insufficient variability in temperature to be able to find any differences between the two groups.

As shown in Table 2, the comparison of the eight actions in care step 2 between the trained and the non-trained group showed that non-verbal communication differed between the groups for all factors assessed ($p < .05$). In this case, better performance on interpreting non-verbal communication was associated with the trained group.

In this step, the importance of how nurses present themselves to the blind is highlighted. Nurses were taught to shake the patient's hand, describe the environment and the positioning of chairs, so that they can familiarize with the room, taking them to the place where they will remain during most of the consultation, and letting them hold the professionals' arm to facilitate movements. The nurses should also have informed the patients about nearby objects and permitted them to touch the objects so that the patients felt more confident and comfortable. An intimate or personal-proximal distance between the nurse and the blind was adopted to favor interaction, and this distance was maintained for the sake of effective communication. Lastly, the nurse faced the blind individual so as to facilitate communication.

In Table 3, the comparison of actions taken in care step 3 between the trained and the non-trained group revealed excellent performance by the trained group in eight out of nine actions ($p < .05$). Only the action "following the nursing consultation script" was insignificant, but indicated a trend in the expected direction ($p = .053$). This result confirms that the consultation script is already part of nursing routine and is considered a necessary tool to perform nursing procedures. Moreover, the script is used for

consultations with diabetics and, hence, does not represent a new element for either of the two groups.

The nursing consultation is an action of both help and learning. In this consultation, the nurse and patient interact, attempting to solve problems that were identified through the nursing diagnosis. It is through the nursing consultation that nurses offer orientation to patient care. In accordance with the literature, through this systemization, the goal is to deliver humane and individualized nursing care directed at meeting the patients' needs and at improving their quality of life⁽¹³⁾.

Each person interprets messages and situations they experience differently. Thus, not everyone understands all messages equally and adequately⁽¹⁴⁾. Hence, delivery of care to blind people represents a great challenge due to their limitations and due to the way blind people express and perceive the world. In this case, nursing care to blind people should favor touch, as this sense is more important for them than sight⁽¹⁵⁾.

Visual impairment can make the nurse-patient relation more difficult and compromise professionals' work in terms of patient advice, patients' treatment adherence, understanding and interpretation of communication, among others. Moreover, it interferes considerably in nurse-patient communication, as sight is undoubtedly one of the main senses in the reception of non-verbal communication^(4,16).

Through this study, we saw how much nurses move their hands in an attempt to make themselves understood by the blind. However, as patients do not have the visual abilities to decode this type of message, these professionals should explore other forms of communication. Nurses need to be aware of the importance of touch in care humanization and ensure that this resource does not become a mechanical act, a source of distancing between nurse and patient or a barrier in the communication process^(4,16).

Table 4 shows a comparison of the actions taken in care step 4 between the trained and the non-trained group. As can be seen, the only action for which no significant difference was found between groups was standing up demonstratively in order for the patient to notice that the nurse performed this action. These actions also characterize the end of the consultation and the finalization of communication, a common step in any nursing consultation.

The care act actively involves the patient; it is not just a procedure or a technical intervention, but a relationship of help, based on respect, comprehension and more effective use of touch. Hence, the following is inferred: if care involves the patient, adequate communication is fundamental, mainly in care delivery to critical and terminal patients. Adequate communication should be appropriate to a given situation, person, time and achieve a defined objective⁽¹⁷⁻¹⁸⁾.

The care act implies the establishment of interaction between subjects (the caregiver and the care receiver) who participate in the realization of actions: care acts are the true essence of nursing. When taking care of the other, an action is performed that is not only technical, but also sensitive, involving contact between human beings through touch, sight, hearing, smell and speech. This action is based on the sensitivity that is characteristic of the senses and also on freedom, subjectivity, intuition and communication. Objective answers to the delivered care should be sought in the clients' expression and in their opinions and gestures through non-verbal communication⁽¹⁹⁾.

CONCLUSION AND STUDY LIMITATIONS

We conclude that the Non-Verbal Communication Protocol is valid for application in nursing practice since, when comparing the actions in care steps 1, 2, 3 and 4 between the trained and the non-trained group, the

trained group obtained excellent results on 23 out of 26 evaluated items.

These results confirm the hypothesis that the Nurse-Blind Non-Verbal Communication Protocol is effective in delivery of nursing care to blind patients. Hence, the use of this procedure in nursing consultations with blind clients is a promising approach and a preliminary nature of this study.

The main limitation in this research is the number of consultations each nurse from the trained group performed. New studies using this model and greater numbers of consultations are necessary to further evaluate the protocol. As far as limitations failure to include other measures in order to provide convergent or divergent validity, and the lack of inter-rater reliability.

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