



IMPAIRED VERBAL COMMUNICATION - RESEARCH IN THE POST CEREBROVASCULAR ACCIDENT

COMUNICAÇÃO VERBAL PREJUDICADA - INVESTIGAÇÃO NO PERÍODO PÓS-ACIDENTE VASCULAR ENCEFÁLICO

COMUNICACIÓN VERBAL PERJUDICADA - INVESTIGACIÓN EN EL POST ACCIDENTE CEREBROVASCULAR

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One of the most common sequelae in people with Cerebrovascular accident, and that affect the quality of life of the patients, is the alteration in communication. The study aimed at investigating the prevalence of the nursing diagnosis Impaired Verbal Communication in patients with stroke in the rehabilitation phase. It is an exploratory cross-sectional study, conducted in two rehabilitation institutions in Fortaleza, CE, Brazil. 40 patients were assessed in the period March-April, 2008. Impaired verbal communication was found in 15 participants (37.5%). The change in speech represented by the diagnosis Impaired Verbal Communication is an alteration present among the patients affected by stroke who were enrolled in this study. The change in speech is an important sequela, one which deserves more attention and preparation of the nurses to provide specific care to people in this condition.

Descriptors: Nursing; Stroke; Nursing Diagnosis; Communication.

Uma das sequelas mais frequentes nas pessoas com Acidente Vascular Encefálico e que interferem na qualidade de vida dos pacientes é a alteração na comunicação. O objetivo do estudo foi investigar a prevalência do diagnóstico de enfermagem Comunicação Verbal prejudicada em pacientes com Acidente Vascular Encefálico na fase de reabilitação. Estudo transversal, exploratório, realizado em duas instituições de reabilitação em Fortaleza-CE. Foram avaliados 40 indivíduos, no período de março a abril de 2008. Comunicação Verbal prejudicada foi encontrado em 15 dos participantes (37,5%). A alteração da fala traduzida na forma do diagnóstico Comunicação Verbal prejudicada é uma alteração presente nos pacientes acometidos por acidente vascular encefálico incluídos neste estudo. Mostra-se como sequela importante merecendo maior atenção e preparo do enfermeiro para prestar cuidados específicos a pessoas com essa alteração.

Descritores: Enfermagem; Acidente Vascular Cerebral; Diagnóstico de Enfermagem; Comunicação.

Una de las secuelas más comunes en personas con accidente cerebrovascular y que pueden afectar la calidad de vida de los pacientes es el cambio en la comunicación. El objetivo de este estudio fue investigar la prevalencia del diagnóstico de enfermería Comunicación verbal perjudicada en pacientes con accidente cerebrovascular en la fase de rehabilitación. Estudio transversal, exploratorio, realizado en dos instituciones de rehabilitación en Fortaleza, Brasil. Se evaluaron 40 individuos en el período de marzo-abril de 2008. Comunicación verbal perjudicada ha sido encontrada en 15 participantes (37,5%). El cambio en la habla traducida en la forma de diagnóstico Comunicación verbal perjudicada ha sido frecuente en pacientes con accidente cerebrovascular en este estudio. Esto demuestra secuela importancia, mereciendo mayor atención y preparación del enfermero para proporcionar cuidados específicos a las personas con este cambio.

Descriptores: Enfermería; Accidente Cerebrovascular; Diagnóstico de Enfermería; Comunicación.

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INTRODUCTION

The alterations in the cardiovascular health constitute world concern, being represented by the increase of life expectancy, by a higher control of the infectious diseases and by the synergic association of several risk factors. In Brazil, the cardiovascular diseases are the main causes of death in the last decades, this reality does not differ from the one found in the world scenario⁽¹⁾. In this context, the non-transmissible diseases such as the cerebrovascular ones are outstanding, especially the Cerebrovascular Accident (CVA), whose world prevalence in the general population varies, ranging from 0.5 to 0.7 %⁽²⁻³⁾, and this percentage is doubled each decade after the age of 55 years⁽³⁻⁴⁾.

The cerebrovascular accident is characterized by the decrease or complete interruption of the cerebral blood flow. Its cause can be thrombotic (ischemic type) or the rupture of blood vessel of the brain causing bleeding in the cerebral parenchyma (hemorrhagic). Both the types cause cerebral malfunction, but the mechanisms of the injury are different. The first one causes the decrease of the perfusion of blood to the brain, while in the second one the cerebral injury comes from the direct contact of the blood structures with the brain cells. The most frequent type of CVA is the ischemic one (80%) compared to the hemorrhagic one (15%)⁽⁵⁾.

This classification is simplified, because if the variables of the affected vascular group (anterior or posterior) and the location and extension of the injuries are taken into consideration, several types of CVA are observed. This type of thinking is also valid when considering the sequelae originated from CVA once each affected brain area will generate a group of specific alterations such as: physical, communication, functional, emotional impairment, among others⁽⁶⁾.

One of the most frequent sequelae which excessively interferes in the quality of life of the patients

is the alteration in the communication, whether verbal or non verbal. The impairment of the verbal communication can be due to injury in the cerebral area responsible for the comprehension of the signs and symbols or for the loss of the normal movement of the speech apparatus. The non verbal impairment can be originated in the encephalic injuries which cause facial muscle *deficits* or by the refined motor skills of the limbs^(5,7).

Problems of communication, mainly verbal communication, constitute a situation which requires special attention of the nursing professionals, with actions of care which take into consideration the difficulty or impossibility of the people to manifest their needs. In 1983, the Impaired Verbal Communication nursing diagnosis was included in the Taxonomy NANDA-I, it was revised in 1996 and 1998 and it is defined as the decreased, retarded or absent ability to receive, process, transmit and use a system of symbols⁽⁸⁾. So, among the several demands of care presented by the bearer of sequelae of CVA, the ones resulting from the impairment of the speech are included.

So, it was chosen to investigate the prevalence of the Impaired Verbal Communication nursing diagnosis in patients with Cerebrovascular Accident in the phase of rehabilitation.

METHOD

It is a study with exploratory, cross-sectional approach, developed in two main offices of the Associação Beneficente Cearense de Reabilitação (ABCR) (Beneficent Rehabilitation Association of Ceará), both located in the county of Fortaleza, Ceará, Brazil.

The population of the study was composed of 40 subjects of both sexes. The criteria of inclusion of the subjects adopted in this study were: a) to be registered at ABCR; b) to have presented at least one episode of cerebrovascular accident, with confirmed medical

diagnosis; c) to be above 18 years; d) to have the minimal conditions to establish communication and to answer the questions made and/or to be escorted by a person who had conditions to answer the questions adequately. The criteria of exclusion were not established. The sample was constituted by the total of the patients assisted in the unit of rehabilitation in March and April, 2008.

The data were collected directly with the client, or, when this subject could not provide the information, with a family member who said to be the caregiver and who knew the health behavior and the needs of care of the patient. The subjects were evaluated through the application of an instrument of data collection composed by social demographic data and questions referring to the evaluation of the defining characteristics of Impaired Verbal Communication nursing diagnosis. This study was made in offices of the ABCR. The data collection was made when the patient came to the rehabilitations sessions.

It was considered that the diagnosis was present, whenever the reduction, delay or absence of the process of verbal or non-verbal communication was noticed through the application of the instrument of data collection.

The data were organized in sheets of Excel software, and statistically treated in the SPSS software version 16.0. The Pearson's X^2 test or the Fisher's exact test was used to assess the association among the nominal variables, the magnitude of the associations was also calculated through the *odds ratio* with its respective intervals of confidence. The Mann-Whitney test was used to compare the medians. In order to have the statistic tests on the characteristics, a cut point of 40% was adopted. Tables for the presentation of the findings were used. For the denomination of the Impaired Verbal Communication nursing diagnosis the

taxonomy II of the NANDA-I was used.

The data collection started after the approval of the project made by the Committee of Ethics in Research of the Universidade Federal do Ceará (Legal opinion no. 113/06), in order to comply with the Resolution no. 196/96, which regulates the researches involving human beings⁽⁹⁾. The patients and family members who participated in this study were told of its objectives and confirmed acceptance signing the Informed Consent Form.

RESULTS

Of the 40 participants in the study, 57.5% were male, with average age of 61.33 years (± 11.58), with minimum age of 39 and maximum age of 85 years. Regarding marital status, 45.0% were married. Another prevalent marital status in the sample studied was widow (32.5%).

The subjects had an average of schooling of 6.76 (± 4.66) years and 42.5% of them presented from 1 to 5 years of study. Most of them have family income between 1 and 3 minimum wages (42.5%), the minimum wage at the time of the data collection was R\$ 415.00. as to number of episodes of CVA presented by each participant, the average of 1.4 accidents was found. The average time elapsed from the date of the last CVA until the day of evaluation was 71.9 months, with the minimum time of one month and maximum time of 684 months.

Regarding the presence of the Impaired Verbal Communication nursing diagnosis, 15 participants (37.5%) presented the diagnosis on the day of evaluation. The defining characteristics were used to subsidize the process of clinical reasoning in order to establish the presence of the diagnosis under study are presented in Table 1.

Table 1 - List of the defining characteristics found with their respective absolute and relative frequencies (no. = 15). Fortaleza, CE, Brazil, 2008

Defining characteristics	Absolute frequency	Relative frequency (%)
Impaired verbalization	14	93.3
Difficulty to form words or sentences	13	86.7
Difficulty to use body expression	11	73.3
Difficulty to use facial expression	11	73.3
Difficulty to express thoughts verbally	11	73.3
Speaks with difficulty	11	73.3
Difficulty to form phrases	9	60.0
Disorientation in time	8	53.3
Difficulty in selective attention	6	40.0
Indistinct pronunciation	6	40.0
Desorientation regarding people	4	26.7
Desorientation of space	4	26.7
Cannot speak	4	26.7
Dyspnea	3	20.0
Partial visual <i>Déficit</i>	2	13.3
Obstinate refusal to speak	2	13.3
Difficulty to understand the common standard of communication	1	6.7
Difficulty to keep the common standard of communication	1	6.7
Does not speak	1	6.7

As shown in the method, analyses of association were made using defining characteristics with frequency

above the point of cut of 40% of presence in the evaluated subjects. This analysis is shown in table 2.

Table 2 - Association among the most frequent defining characteristics with socio-demographic and clinical indicators. X^2 ($p < 0.05$). Fortaleza, CE, Brazil, 2008

Defining characteristic	Indicators						
	Gender	Marital status	Family income	Has caregiver	Level of altered consciousness	Orientation: Time/Space/Person	Headache
Impaired verbalization	0.143	0.700	0.532	0.138	0.205	-	0.605
Difficulty to form words or sentences	0.025	0.825	0.296	0.089	0.215	0.087	0.448
Difficulty to use body expression	0.409	0.115	0.263	0.394	0.634	0.387	0.770
Difficulty to use body expression	0.409	0.228	0.532	0.028	0.634	0.026	0.770
Difficulty to express thoughts verbally	0.409	0.635	0.296	0.331	0.634	0.006	0.243
Speaks with difficulty	0.409	0.635	0.956	0.727	0.634	0.338	0.770
Difficulty to form phrases	1.000	0.690	0.296	0.441	0.519	0.006	0.792
Disorientation in time	0.464	0.535	0.164	0.710	0.205	0.036	0.438
Difficulty in selective attention	0.264	0.435	0.296	0.349	0.010	0.387	0.114
Indistinct pronunciation	0.264	0.690	0.850	0.670	0.667	0.007	0.792

A statistic association was found when relating gender and difficulty to form words or sentences ($p=0.025$), with OR 0.40 (IC 95%: 0.1- 0.8). Another relevant finding ($p=0.006$) was the relation between the

characteristic Difficulty to express thoughts verbally and the indicator Orientation: time/space/person with OR=0.16 (IC 95%: 0.02 – 0.99). Another characteristic which presented statistically significant relation with the

indicator Orientation: time/space/person was Indistinct pronunciation ($p=0.007$) with $OR= 0.12$ (IC 95%:0.02-0.78). Another finding regarding the indicator Orientation: time/space/person was the defining characteristic Disorientation in time, but it is within the evaluation of the first indicator, therefore these indicators are correlated.

From this evaluation and determination of the presence of the diagnosis under study, the subjects were grouped distinctly, the socio-economical characteristics of each group were separately analyzed, as shown in Table 3.

Table 3 - Distributions of the socio-economical variables and of antecedents of CVA of the participants with Impaired Verbal Communication diagnosis present (no. = 15) or absent (no. =25). Fortaleza, CE, Brazil, 2008

Variables	Presence of the diagnosis	Absence of the diagnosis	p value
Average age (in years)	59.7	62.3	0.618**
Gender			
Male	66.7%	52.0%	0.364*
Female	33.3%	48.0%	
Average schooling (in years)	5.3	7.6	0.128**
Marital Status			
Single	0.0%	16.0%	0.235*
Married	60.0%	36.0%	
Widow	33.3%	32.0%	
Divorced	6.7%	16.0%	
Family Income			
≤ 1 minimum wage	30.8%	31.8%	0.946*
1-3 minimum wages	46.2%	40.9%	
3-6 minimum wages	23.1%	27.3%	
Average number of CVA	1.8	1.2	0.018**
Average time after CVA (in months)	37.5	93.4	0.169**

* Pearson's correlation test** Mann-Whitney test

As observed in Table 3, no statistic significance was found among the variables age ($p=0.618$), gender ($p=0.364$), schooling ($p=0.128$), marital status ($p=0.235$), family income ($p=0.946$) and average time after CVA ($p=0.169$) with the variable Presence of the Diagnosis, considering a level of significance of 5%. As a counterpart when relating the variable Average number

of CVA with the Presence of Diagnosis, $p=0.018$ was found, thus representing a directly proportional among this variables.

DISCUSSION

The cerebrovascular diseases are disorders generally associated to the elderly people or in a more advanced age range. The age average of the subjects of the present study is compatible with the ones found in the literature⁽¹⁰⁾. With the advance of the age, the presence of inadequate style of life associated to genetic factors unchain the appearance of diseases of non transmissible diseases which are closely linked to CVA, such as blood high pressure and the diabetes mellitus. These diseases when added to cardiovascular diseases, such as atherosclerotic processes, alteration of blood clotting or aneurisms, increase the chance of a person to be attacked by CVA⁽⁴⁾.

The low schooling founded in the group evaluated (42. 5% studied from 1 to 5 years) can be associated to family income which was equally low, concentrated in around 1 to 3 minimum wages. These two aspects (low schooling and low income) influence the health of the population, especially their eating habits, which are, in turn, basic risk factors for the cardiovascular and cerebrovascular diseases. Besides that, the lack of financial resources also interferes in the rehabilitation after the occurrence of the CVA, once most part of the services in which the assistance is free, the process of rehabilitation does not include assistance of Phonoaudiology.

The recurrence of vascular accidents is evident in the subjects with average number of 1.4 episodes. The recurrence of the CVA is quite related to previous events, that is, having an episode of CVA is a very important risk factor for the occurrence of other episodes, once the other risk factors are usually present even after a well succeeded recuperation and without sequelae⁽⁴⁾.

The Impaired Verbal Communication diagnosis was found in 15 subjects (37.5%). The findings are compatible with the specific literature, which states to be 20 to 40% the occurrence of speech problems in patients with CVA^(5,7). The defining characteristic of the diagnosis under study which obtained the highest prevalence was Impaired Verbalization (93.3%). This is a generic characteristic and covers most of the alterations of verbal communication, thus justifying its high prevalence.

The presence of the diagnosis means impairment in the capacity of the people to demonstrate their needs and connect with the world, regarding the interpersonal communication.

The communication is a process which is closely linked to the human being, and this is a central component of the mental health. Therefore, man is, by excellence, a being of communication⁽¹¹⁻¹²⁾. It is important to remind that in the present study, the presence of the diagnosis studied had as common related factor the cerebral injury resulting from CVA

The second most frequent characteristic was Difficulty to form words or sentences (86.7%). This characteristic presents a relation with the gender expressed as a protecting factor for the men, therefore, the subjects of the male sex have 60% fewer chances to present these characteristics. It defines the problems of speech linked to the neuromuscular impairment of the vocal apparatus, that is, when there is some interruption in the transmission way of the commands of the superior centers and muscular problems in the transmissions of the impulses⁽¹³⁾. The most frequent alterations in the subjects who presented these characteristics were: dysarthria (40%), dyslalia (33.3%) and the aphonia (13.3%) which form the defining characteristic Difficulty to form words. A percentage of the patients who presented dysarthria, 20 to 30%, was found in the literature, this datum is inferior to the one found in this study⁽¹⁴⁾.

The defining characteristic Difficulty to express thoughts verbally (73.3%) was one of the most frequent and is quite representative of the diagnosis studied. It is present when there is an injury in the upper cortical centers related to the association of objects, the understanding of a message, the decoding of the same, the processing of the message and the response, and this characteristic can be present in a situation of neurological disturb. The most frequent disorders of the language in the participants were dysphasia (60%) and apraxia (13.3%) which are aspects of the defining characteristic difficulty to form words. Researches show that aphasia would be the main disorder within this group^(13,15) but in the present study, this alteration was not observed.

The statistic association between the characteristic Difficulty to express thoughts verbally and the indicator Orientation: time/space/person ($p=0.006$). This indicator is the protecting factor for the presence of Difficulty to express thoughts verbally with a chance 84% smaller.

Another significant finding was the association between the indicator Orientation: time/space/person and the characteristic Difficulty to form phrases ($p=0.006$), also as a protecting factor with a change 84% smaller. The indicator Orientation: time/space/person still kept a relation with another characteristic, the Indistinct pronunciation ($p=0.007$). as in the previous findings, the indicator is also interpreted as a factor of protection with the chance 88% smaller.

The characteristic Indistinct pronunciation even allows a layman to come to the conclusion that a certain patient has serious problems in the communication. The presence of this characteristic can deeply impair the process of communication nurse/patient, once many times the health professional cannot understand the message⁽¹⁶⁾.

The characteristic Difficulty to use facial expression, present in 73.3% of the participants

evaluated, is common in the people who presented sequelae of the CVA, once the facial paralyzation, of one or both sides, is also very common in this population. Many times this paralyzation is noticed as a notorious deviation of the lip rim and flaccidity of the musculature of the face (especially of the malar region), leading the person to have difficulty in keeping the mouth shut, and the consequent extravasation of saliva⁽¹⁶⁾. There is an association of the characteristic Difficulty to use facial expression with the indicator Presence of the caregiver ($p=0.028$), but it was not possible to estimate the risk due to the fact that the expected frequencies (EF) were low.

The characteristic Difficulty in selective attention and the indicator Level of consciousness presented association ($p=0.010$), but the risk was also not estimated due to the fact that the expected frequencies were lower than five. The selective attention is essential to the process of communication, among other reasons, so that the answer corresponds to what was asked, or, in order not to repeat the subject all the time in the conversation⁽¹⁷⁾. The findings of the above mentioned study show association between deficit in the selective attention and communication, thus jeopardizing the process of learning.

Regarding the specific socio-demographic characteristics of the participants who presented diagnosis compared to the ones without the diagnosis, there was as similarity among the variables age ($p=0,618$), distribution of gender ($p=0,364$), marital status ($p=0,235$) and family income ($p=946$).

The subjects with the diagnosis Impaired Verbal Communication studied an average of 5.35 years opposite to those without the diagnosis who studied around 7.58 years. No statistic significance was found ($p=0.128$). It is known that the higher schooling is, the higher the access to information and understanding of the information will be. Therefore, the subjects who did not present the nursing diagnosis under study, probably

followed the treatment instituted more insistently or, for better controlling the risk factor, they were affected by CVA with degrees of small gravity and in a smaller number. These findings are compatible with others in the literature⁽¹⁰⁾.

Another datum, which is possibly also associated to a shorter time of schooling of the participants, who presented the diagnosis studied, is the higher average of numbers of CVA (1.8) in this group, compared with the average of those who did not present the diagnosis (1.16). Once the recurrent CVA has great chances to affect different vascular sites and, therefore, cause injuries in different cerebral areas, which can lead to the accumulation of sequelae. Ratifying that statement, in the present study, statistic association was found strengthening the directly proportional relation between the number of CVA and the diagnosis under study.

The time post CVA was another datum that differentiated the two groups of participants. The subjects who presented the nursing diagnosis under study were affected by CVA more recently, with an average of 37.53 months, opposite to those without the nursing diagnosis who presented an average time of being affected by CVA of 93.45 months. This difference can be explained by the evolution of the sequela of the CVA presented by the patients along the time, whether it is motor or of the function of the language, but no statistic significance was found ($p=0.169$).

The evolution of the problems related to communication of the patient affected by CVA will depend on the injured encephalic area, on the extension and gravity of that injury and on the cerebral capacity of the patient to establish new inter-neural connection, capacity of other cerebral areas to take over the function of the area previously affected by CVA as well as other psychosocial factors related to motivation. The recovery of the function of the language in less serious patients is bigger in the first six months and in the most serious it can reach two years⁽¹³⁾.

CONCLUSION

The present studies ratifies the importance of the assistance directed to the nursing diagnosis Impaired Verbal Communication in subjects who suffered CVA, because that is one of the most present sequelae in this population and by the proportion that this morbidity is growing all over the world.

The alterations in the communication can developed other comorbidities once, in most cases, the person ends up not being understood by the other and the situation can generate feelings of frustration for not managing to be understood. This problem is potentially inducing of a depressive condition or its worsening.

Once the problems of communication that the person bearing cerebrovascular accident can present are recognized, the nursing team must consider how this will interfere in the planning of interventions and make an effort to provide assistance of quality that takes into account the problems presented by the subject.

Therefore, impairments of speech translated in the form of Impaired Verbal Communication nursing diagnosis, are alterations present in people affected by CVA. That is shown as an important sequela in the social context of those patients, deserving a bigger attention of the nursing professional in the therapeutic approach of the person with this alteration and also in the actions of prevention of the occurrence of new episodes of CVA, especially in order to mainly avoid its recurrence and consequent accumulation of sequelae.

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COLLABORATIONS

Chaves DBR, Costa AGS and Oliveira ARS contributed for the conception, collection of the field data, analysis, interpretation of the data, writing of the article and final approval of the version to be published. Silva VM, Araujo TL and Lopes MVO contributed for the conception, analysis, interpretation of the data, writing of the article and final approval of the version to be published.

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