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## Evaluation tool for health needs of people with disabilities: a methodological study

Sâmara Sirdênia Duarte do Rosário Belmiro<sup>1</sup>, Francisco Arnaldo Nunes de Miranda<sup>1</sup>, Isabelle Katherinne Fernandes Costa<sup>1</sup>, Alexsandro Silva Coura<sup>2</sup>, Inácia Sátiro Xavier de França<sup>2</sup>, Glauber Weder dos Santos Silva<sup>1</sup>

*1 Federal University of Rio Grande do Norte*

*2 State University of Paraíba*

### ABSTRACT

**Aim:** To describe the semantic validation process of an instrument for assessing health needs for people with physical, hearing and visual impairment (IANS-PcDFAV). **Method:** This is a methodological study carried out between April and May 2016, regarding the semantic and appearance validation stage. Eight disabled persons, registered in three support institutions, responded to three instruments: general and specific impression questionnaire and the IANS-PcDFAV. Brainstorm technique was used. It was analyzed by descriptive statistics and by the frequency of the presented answers. **Results:** The instrument was considered important or very important, with items that are easy to understand. Of the 32 original items, eight were changed for the better understanding and four were negatived, one in each dimension. **Conclusion:** The instrument was comprehensible for all strata of the studied population, confirming it as valid in terms of semantics and appearance.

**Descriptors:** Disabled Persons; Health Services Needs and Demand; Validation Studies.

## INTRODUCTION

According to the report published by the World Health Organization<sup>(1)</sup>, entitled "World report on disability", it is estimated that more than one billion people in the world live with some form of impairment or disability, which corresponds to about 15% of the world population.

A Brazilian study<sup>(2)</sup> verified the prevalence of self-reported disability, which identified 12.4 million people. Of these, it was evidenced that 2.6 million reported having physical disability, 2.2 million hearing loss, 7.2 million visual impairment and 400,000 people with intellectual disability.

Despite representing a considerable number of people in Brazil and in the world, the history of the disabled persons (DPs) was marked by exclusionary and discriminatory processes, with negative repercussions in several aspects of their lives, such as work, leisure and health. After a long period of fighting, some achievements were achieved. Among the achievements, the *Convenção sobre os Direitos da Pessoa com Deficiência* (CDPCD - Convention on the Rights of Persons with Disabilities)<sup>(3)</sup> can be seen as a historical milestone, with legal representation in the recognition and promotion of the human rights of DPs and in the prohibition of discrimination against this segment of the population in all areas of life<sup>(3)</sup>.

The document adopted in the CRPD includes specific forecasts for rehabilitation and habilitation, education, health, access to information and public services, among other rights<sup>(3)</sup>. In 2008, Brazil ratified the Convention, adopted by the United Nations (UN), as well as its Optional Protocol. This attitude guaranteed the equivalence of constitutional amendment, valuing the joint action between civil society

and government, in a possible democratic effort<sup>(4)</sup>.

One of the major advances achieved by the Convention was the change from the medical model to the social model of disability<sup>(4)</sup>. This new model clarifies that the limiting factor is the means of insertion in society and not the deficiency itself. It is considered that the deficiencies do not necessarily indicate the presence of a disease or that the individual is considered to be ill<sup>(5)</sup>.

In the health field, this model change had an important impact on understanding and performing care for disabled persons (DPs). A movement to think about health care beyond rehabilitation began to be understood, although in an incipient way, the importance of identifying the real health needs of these people was understood<sup>(5)</sup>, following the precepts of the Convention: "nothing about us without us"<sup>(3)</sup>.

However, the recognition of health as the right of all and the duty of the State did not effectively guarantee the constitutionally established rights<sup>(4)</sup>. The health of DP was a preferred agenda in the Unified Health System (SUS). This situation was due to initiatives that were punctual, partial and without connection with the principles of integrality, equity, universality and qualified and universal access to health<sup>(4)</sup>.

It is considered that concrete health practices often do not include the values, knowledges and needs of those who are cared for<sup>(6)</sup>, as is the case with DP. Health needs are conceived as historical and social<sup>(7)</sup>, so they change with time and with the demands of each age. Given this, it is relevant to say that the responses to this range of needs, and their multiple factors involved, are not restricted to the performance of a single professional, or solely from health area. The actions are exten-

ded to multiprofessional, interdisciplinary and intersectoral practices, so that more effective responses to the health needs of the people are possible<sup>(6)</sup>.

A study carried out in the city of João Pessoa, Paraíba, Brazil, attempted to identify the support networks, as well as the health services, which are part of the primary care and that assist the DPs, since this type of care is restricted, many times, to rehabilitation centers and other secondary care services. This restriction compromises access, considering the repressed demand existing in these places, not guaranteeing the integrality of the attention<sup>(2)</sup>.

It is necessary to evaluate the health needs of DPs in order to understand the singularities that surround life and their way of life, the services that are organized, both from the point of view of physical structure and professional qualification<sup>(2)</sup>.

In this scenario, it is necessary to think about strategies that can identify and evaluate the health needs of the DPs. In this study, the basis for meeting this proposal lies in the development and validation of a Health Needs Assessment Instrument for People with Disabilities, specifically physical, auditory and visual impairment.

The purpose of this study was to describe the process of semantic validation of an instrument for assessing the health needs for people with physical, hearing and visual impairment (IANS-PcDFAV).

## METHODS

This is a descriptive methodological study<sup>(8)</sup>, focused on the development and validation of an instrument. The stages of the theoretical pole proposed by Pasquali<sup>(8)</sup> were

followed. This pole deals with the question of the theory that involves the construct for which one wants to develop an instrument of measurement, as well as its operationalization in items, beginning with the delimitation of the psychological system or construct that one intends to measure and the delimitation of the attributes, from the researcher's experience, literature support and experts in the field<sup>(8-9)</sup>.

In the first phase, the constitutive and operational definitions of the construct and the elaboration of the items that composed the instrument called the Health Needs Assessment Instrument of People with Physical, Hearing and Visual Impairment (IANC-PcDFAV) were identified through the integrative review of the literature, carried out in the databases CINAHL, MEDLINE, LILACS and SCOPUS; experience of researchers; and in the Taxonomy of Health Needs of Matsumoto and Cecílio; later, the theoretical analysis of the items was carried out in two stages. Stage 1 – Content validation, based on Delphi technique, with expert healthcare professionals who would act as judges of the instrument. The sample consisted of 33 Delphi 1 and 18 Delphi 2 experts. For data collection, the form was submitted to specialists online. The analysis was carried out by adopting the Content Validity Index (CVI) > 0.80 and Cronbach's Alpha > 0.80. The Mann-Whitney test was used to investigate the differences between the Delphi 1 and 2 phases with  $p > 0.05$ . The consensus was obtained in the second round of evaluation, achieving excellent validation indexes.

Table 1 shows the items of the instrument with the content valid by the specialists.

In this study the theoretical analysis of the items is carried out, in this case, the semantic analysis, one of the stages of the theoretical pole<sup>(8)</sup>. This type of validation consists in verifying that all items are comprehensible

**Table 1.** Items of the instrument with valid content. Natal, 2016.

<b>Assessment Tool for the Health Needs of Persons with Disabilities (IANS-PcD)</b>	
<b>Domain 1</b>	Do you receive care from health professionals? (doctors, nurses, physiotherapists, psychologists, among others)
	Do you need assistance with rehabilitation services? (physiotherapy, speech therapy...)
	Do you need to get orthoses? (Insoles, vests, plastic splints, cervical collar for immobilization, knee, cane, hearing aid...) and Prosthetics? (joint prosthesis, breast prosthesis, intraocular lens, vascular prosthesis...)
	Do you need information about rehabilitation services? For example, speech therapy, physiotherapy, occupational therapy, and availability of services, proximity, accessibility.
	Do you take the necessary exams? This includes trained professionals to help you, accessible appliances and equipment, access to adequate information and transportation.
	Do you get professional assistance to meet your health needs? For example, prescription drugs, request for exams, access to health care at the health post, specialists and mental health care.
	Are you able to get in and out of hospitals, health centers and clinics?
	Do you have access to medical and hospital equipment necessary to maintain your survival? As for example, oxygen tanks, adapted beds, wheelchair catheters, urine collectors, cushion for limb support, dressings, among others.
	Do you have access to educational activities and materials on health, illness, and quality of life?
<b>Domain 2</b>	Can you communicate with health professionals and health care workers?
	Are the professionals that assist you trained and sensitized to meet your needs?
	Do the professionals who perform your care know all your care needs?
	Do you receive follow-up by professionals who already know your needs and your life history?
	Do the professionals who perform your care respect your privacy, beliefs, culture, religiosity, sexuality, knowledge and communication skills?
	Do the professionals that perform their care allow quality home care?
<b>Domain 3</b>	Do you have adequate support to perform your daily care? For example, eating, bathing, dressing, trimming hair, urinating, defecating, and using the toilet.
	Do you have adequate support for moving around at home, on the street, or at work? For example, transfers between environments, walking indoors, walking on the street, moving in a wheelchair, using stairs, using orthoses and prostheses.
	Do you have adequate support to take care of your home? For example, cleaning the house, preparing meals, shopping, washing clothes, using the telephone, taking medications, and organizing the budget.
	Do you have adequate support to remember tasks or appointments, to orient yourself in relation to time and space, in order to understand and judge situations, and how to behave in situations?
	Do you have adequate support to communicate, see, hear, or speak?
	Do you have adaptations in your home that make your life easier? For example, ramps, extending kitchen or bathroom doors and special accessories.
	Do you have difficulty getting access to transportation to reach health, safety and leisure services?
	Are you treated with respect when you need help?
	Do you have adequate support to communicate, see, hear, or speak?
<b>Domain 4</b>	Do you need support/help to access/use caregiver services, social services from public benefit programs, among others?
	Do you have access to sufficient, clear and easy to find health information? For example, information about disability, treatments, remedies, legal rights and disability-related services.
	Can you access the rights and social benefits guaranteed by law? As for example, the exemption in the collective transportation fare and the benefit of a Social Security minimum wage.
	Do you need support/help to access/use caregiver services, social services from public benefit programs, among others?
	Do public welfare policies meet their individual needs?
	Is it easy to access human rights services for people with disabilities?
	Do you have priority when you go to hospitals, clinics, health centers and rehabilitation services?
	Do you need help accessing leisure spaces and living with other people? As, for example, theaters, soccer fields, gymnasiums, church, cinema, shopping malls...).

to the members of the population to which the instrument is intended<sup>(8-9)</sup>. It has two functions: 1 - to verify whether the items are intelligible to the stratum of the target population that presents a lower degree of ability (lower extract); 2 - to verify the Apparent Validity of the instrument by consulting the stratum of higher skill (more sophisticated) of the target population<sup>(8)</sup>.

To this end, the understanding of the instrument was verified by a sample of eight people with disabilities. Of these, two had physical disabilities; two had hearing impairment with interpreter access to Libras at the time of collection; four were visually impaired, with access to the reader, at the time of collection and were registered or enrolled in the organizations/institutions participating in the study (Mossoró Deaf Association, Mossoró Association of the Physically Disabled and Mossoró Association of the Visually Impaired); aged over 18 years, possessing a level of education that provided reading and comprehension skills.

This number of subjects is in accordance with the adopted methodological framework, which recommends a minimum number of subjects for semantic validation, without the need for a sample calculation related to statistical inferences<sup>(10)</sup>.

Data collection took place in April and May 2016. Telephone contact was made to invite and schedule for participation in the study. The meetings took place at the headquarters of the organizations and institutions that gave consent for conducting the research. The DPs who agreed to participate received guidance on the purpose of the study and signed the Informed Consent Form in two copies.

The brainstorm technique was used. It consists of groups of up to four people, start-

ing with the subjects of the lowest stratum of the target population (Group 1 - four people), and then with a group of the highest stratum (Group 2 - four people). With the item comprised by Group 1, it was moved to the other group. If not, it was necessary to review the considerations of the group. As for Group 2, a verification session was held in order to avoid items to be too simple for such persons<sup>(8)</sup>.

The first moment of the data collection consisted in filling in the IANS-PcDFAV, with the content already validated in the previous stage of the study. In the second phase, participants completed the initial version of the instrument, a general impression form, which aims to evaluate the general characteristics of the IANS-PcDFAV (importance, difficulties in answering the questions, changes and additions required). In the third moment, the form of specific impressions (cognitive interview), which aims to verify the relevance and comprehension of the proposed items, was completed. Both the general impression form and the specific print form were adapted from the method proposed by the DISABKIDS® project<sup>(11)</sup>.

Subsequently, based on the method of paraphrasing (variant of the think aloud method)<sup>(12)</sup>, the DPs were invited to repeat the item with their words and to describe their meaning. As a result of the exhaustion of this task, the 32 IANS-PcD items were divided by four subsets, represented by the four dimensions of the instrument: subset A (items A1 to A9), subset B (items B1 to B6), subset C (items C1 to C9) and subset D (items D1 to D8), and each two participants performed specific semantic validation of only a subset of items.

The data collected were organized and analyzed using descriptive statistical techniques, using the statistical program SPSS version 20.0, obtaining the mean and standard deviation. For semantic validation, a fre-

quency > 80% was considered in the responses of the General Impressions Questionnaire. For the qualitative study of semantic validation, the frequencies of the answers obtained in the general impression questionnaire and in the cognitive interview were calculated. For the specific validation of the items, a minimum frequency of three negative responses was considered as indicating that the item could present problems and should be subject to further revision.

After semantic validation, it was decided to perform a lexical and grammatical correction by two reviewers, with qualification for such function, in order to guarantee the validity of the evaluation. In cases of disagreement between the two reviewers, a third party should give their opinion.

Ethical precepts established by Resolution 466/2012 of the National Health Council of Brazil were followed. Approval was obtained for conducting the study by the Research Ethics Committee of the Federal University of Rio Grande do Norte (UFRN) (CAAE 39639014.3.0000.5537), respecting all national and international human research standards.

## RESULTS

Eight people with varying degrees of disability participated in this study, mean age 42.7 years ( $\pm 10.6$  SD). As to the type of disability, four were people with visual impairment (50%), two were people with physical disabilities (25%) and two were people with hearing loss (25%). As for educational level, two participants had completed higher education (25%); one, incomplete higher education (12.5%); three, complete secondary education (37.5%); one, incomplete high school (12.5%); and one, incomplete elementary school (12.5%).

## GENERAL SEMANTIC VALIDATION

People with disabilities expressed a positive overall impression of the version of the Instrument for the Assessment of the Health Needs of Persons with Physical, Hearing and Visual Disabilities (IANS-PcDFAV). Most of the DPs evaluated the items in the questionnaire as easy to understand and showed no difficulties in using the response scale. The issues were assessed as very important or sometimes important by most participants. Only a small percentage of DPs expressed a desire to change/add questions to the questionnaire and no participants considered the questions intrusive, in a way that they did not want to respond, according to Table 1.

## SPECIFIC SEMANTIC VALIDATION

In the specific semantic validation phase, all items were considered important for assessing the health needs of people with disabilities by at least six of the eight participants. The questions were considered comprehensible by all DPs, with the exception of items A3, A8, B4, B5, D1, D4, D5 and D6, as shown in Table 2 below.

For the remaining items, the cognitive interviews confirmed the equivalence between the concepts that were intended to be evaluated and the participants' interpretation of the items. Only item A3 (Are you required to obtain orthoses (insoles, vests, plastic splints, cervical collar for immobilization, kneepad, cane, and hearing aid) and prostheses (joint prosthesis, breast prosthesis, intraocular lens, and vascular prosthesis)?) Was considered problematic, based on the criterion of a minimum frequency of three negative responses. The paraphrasing method revealed that the meaning attributed by the DPs to the item

**Table 1.** General impression/General semantic validation of the Instrument for the Assessment of the Health Needs of Persons with Disabilities (IANS-PcD). Natal/RN, 2016

Questions	Responses	People with disabilities	
		N	%
1. In general, what do you think of our questionnaire?	It's very good or good.	8	100
	It is not good	0	0
2. What did you think of the issues?	Easy to understand	8	100
	All are difficult to understand	0	0
3. What about the answers, have you had any difficulty understanding them?	No difficulties or with some difficulties	8	100
	With many difficulties	0	0
4. Are the issues important for assessing the health needs of people with disabilities?	They are very important	8	100
	Sometimes they are important	0	0
	Not at all important	0	0
5. Would you like to change anything on the questionnaire?	Yes	1	12,5
	No	7	87,5
6. Would you like to add something to the questionnaire?	Yes	1	12,5
	No	7	87,5
7. Was there a question you did not want to answer?	Yes	0	0
	No	8	100

was different from that intended because of the confusion between the terms “orthoses” and “prostheses”.

The interviewees' suggestions generated changes in three main categories: substitution of some terms used by others of better understanding, inclusion of the meaning of not-known words, and use of examples that could help the understanding of words or terms. The determination of the relevance of the suggestions provided by the DPs and the choice of the best adjustment strategy were used with a focus on the objective of the instrument, which is to assess the health needs of people with disabilities.

The answer options (0 - nothing, 1 - very little, 2 - more or less, 3 - very, 4 - completely and 0 - none, 1 - few, 2 - more or less, 3 - very, 4 - extremely) were assessed by all participants.

Of the 32 original items, eight were altered with a view to a better understanding and four were negated, one in each dimension, with a view to not conditioning the respondent to answer only in an affirmative way, thus

ensuring greater methodological rigor to the instrument. The items and their respective changes and denials are shown in Table 3.

It is noteworthy that people with visual impairment requested a trained reader and people with hearing impairment, even if they were literate, requested the presence of the interpreter of the Brazilian Language of Signals (Libras) for the application of the instrument.

It should be noted that, in order to guarantee the quality of the validated items, the lexical and grammatical correction of the items was performed, guaranteeing better quality of the instrument. Of the evaluated items, three have undergone changes, which are underlined in the table below (Table 4).

## DISCUSSION

The study participants presented socio-demographic characteristics that portray the Brazilian reality for DPs, such as, for example, the mean age above 30 years<sup>(13)</sup>. In addition,

**Table 2.** IANS-PcDFAV items that presented difficulties of comprehension and suggestions for reformulation. Natal/RN, 2016

Item	Identified problem	Suggestion for reformulation	Acceptance
A3. Do you need to get orthoses? (Insoles, vests, plastic splints, cervical collar for immobilization, kneepad, cane, hearing aid) and prostheses? (joint prosthesis, breast prosthesis, intraocular lens, and vascular prosthesis)	- Use of terms not known (orthosis and prosthesis); - Many examples of orthoses and prostheses that appear in the item are not specific to their type of disability, and this hinders the understanding.	- Put the meaning of the terms in parentheses; - Differentiate the types of orthoses and prostheses for each type of disability.	Yes
A8. Do you have access to medical and hospital equipment necessary to maintain your survival? Such as, for example, oxygen tanks, adapted beds, wheelchairs, catheters, urine collectors, cushion for limb support, dressings, among others.	- Many examples of medical and hospital equipment that appear in the item are not specific to their type of disability, and this hinders the understanding.	- Make differentiation of types of medical equipment for each type of disability.	Yes
B4. Do you receive follow-up by professionals who already know your needs and your life history?	- The word "monitoring" makes it difficult to understand the item.	- Change the word <b>monitoring</b> by <b>care</b> .	Yes
B6. Do the professionals that perform your care allow quality home care?	- The term <b>home monitoring</b> was not comprehensible.	- Use a similar term that has the same meaning: home care.	Yes
D1. Do you need support/help to access/use caregiver services, and social services from public benefit programs, among others?	- The use of the words "support" and "access" make it difficult to understand the item.	- Remove words that make it difficult to understand the item.	Yes
D4. Are you aware of public policies for people with disabilities?	- Difficulty in understanding what a public policy is.	- Bring examples of public policies in parentheses.	Yes
D5. Do public welfare policies meet your individual needs?	- Difficulty in understanding what a public policy is.	- Bring examples of public policies in parentheses.	Yes
D6. Is it easy to access human rights services for people with disabilities?	- Difficulty in understanding what human rights are.	- Put in brackets what is meant by human rights.	Yes

**Table 3.** Changes in the instrument for assessing the health needs of people with physical, hearing and visual impairment (IANS-PcDFAV). Natal/RN, 2016

Item		Action
AA3	Do you need to get orthotics (device used to supply or correct the change of an organ, limb or segment of a limb, or the deficiency of a function, for example: cane, magnifying glass, or sound amplifier) and prostheses (device used to replace an organ, limb, or part of the limb destroyed or severely affected. E.g. prosthesis, joint prosthesis, or hearing aid)?	Changed
AA6	I do not receive professional assistance to meet my health needs, such as prescription medications, request for exams, access to health care at the health clinic, specialists and mental health care.	Positive form changed to negative
AA8	Do you have access to medical and hospital equipment necessary to maintain your survival? As for example dressings, colostomy bags, adapted beds.	Changed
BB3	The professionals who perform my care do not know all my care needs.	Positive form changed to negative
BB4	Do you receive care by professionals who already know your needs and your life history?	Changed
BB6	Do you get any kind of home health care?	Changed
CC5	Overall, I do not have adequate support to communicate, see, hear, or speak.	Positive form changed to negative
DD1	Do you need help getting caregiver services, social services from public benefit programs, among others?	Changed
DD4	Are you aware of public policies for people with disabilities? (Example: policies that guarantee the accomplishment of examinations, priority in the attendance, accessibility in the health services...)	Changed
DD5	Do public welfare policies meet your individual needs? (Example: policies that guarantee the accomplishment of examinations, priority in the attendance, accessibility in the health services...)	Changed
DD6	Is it easy to access human rights services (services that meet the demands of equality before the law) for people with disabilities?	Changed
DD7	In general, I do not have priority in the care when I go to hospitals, clinics, health posts and rehabilitation services.	Positive form changed to negative

**Table 4 -** Lexical and grammatical changes carried out in the instrument for assessing the health needs of people with physical, hearing and visual impairment (IANS-PcDFAV). Natal/RN, 2016

Item		Action
AA2	Do you need assistance with rehabilitation services? (physiotherapy, speech therapy...)	Changed
AA3	You need to get orthoses (a device to supply or correct a change in an organ, limb or segment of a limb, or the deficiency of a function, for example: cane, magnifying glass, sound amplifier) and prostheses (device to replace an organ, limb or part of the limb destroyed or severely affected. E.g, prosthesis, joint prosthesis, hearing aid)?	Changed
CC6	Do you have adaptations in your home that make your life easier? For example, ramps, extending kitchen or bathroom doors and special accessories.	Changed

<sup>a</sup>The final version of the instrument can be obtained on demand (sirdenia.dr@hotmail.com).

the need for a trained reader and a Brazilian Sign Language interpreter to carry out the communication imply factors that may lead to low or no health information for DPs<sup>(14)</sup>. This fact reveals the importance of using a technology that is comprehensible and accessible to the target audience, ratifying the need to semantically validate the instrument produced to assess the health needs of DPs, such as IANS-PcDFAV.

In view of the growing interest shown in recent years in the role of the DPs in matters concerning their lives and society, guided by the provisions of the Convention on the Rights of Persons with Disabilities, it is imperative that any material/technology produced for this population segment is also validated by them, respecting the indication: nothing for us, without us<sup>(3)</sup>.

Regarding the general impression of the IANS-PcDFAV, it was quite positive, confirming the relevance of the items for the evaluation of the health needs of people with physical, hearing and visual disabilities, as well as their comprehensibility and adequacy of the response scale. This process proved to be relevant, since it allowed elucidating the importance of the elements contained in the instrument and identifying the necessary adjustments to increase the reliability of the instrument<sup>(15)</sup>.

The cognitive interview was an essential procedure in the identification of problems in the understanding of the items, contributing to the reformulation of the items. A factor strongly present in the semantic validation process was the difficulty of the participants to identify terms or words that are part of the technical language in health related to the rehabilitation of DPs, such as orthoses and prostheses. At the time of the interview, it was observed that some of them use orthoses or

prostheses, but they did not know what they were, revealing the lack of information regarding their health issues.

A study on health knowledge conducted with deaf people revealed that these people did not know about health due to poor and inefficient sources. It is added that the information provided is primary, with no depth of contents<sup>(16)</sup>. This reality is not restricted to deaf people. DPs of all kinds suffer daily from exclusionary processes in all areas of their lives, and health is no different. It is observed that the communication process between health professionals and DPs is fragile and ineffective<sup>(16)</sup>.

Knowledge about health, even if elementary, is essential for the subject to contribute positively to the health/disease process. It is emphasized that people can effectively exercise their right to citizenship, and consequently to health, through the empowerment of information<sup>(16)</sup>.

Another worrying fact was the lack of knowledge of the terms: public policies and human rights. Attention is drawn to the fact that all participants in this study are linked to associations of people with disabilities and some are still linked to social movements fighting for people with disabilities, and yet there are still difficulties of access to information on social and human rights<sup>(18)</sup>.

The result of this study differs from that of a study carried out in Fortaleza, capital of Ceará State, where the DPs reported the knowledge and repercussion of inclusive public policies for their lives<sup>(19)</sup>. This differentiation can be explained by the fact that in the Brazilian reality the public policies for the DPs, for the most part, are neither effective nor efficient<sup>(20)</sup>, presenting a greater slowness to reach urban centers with lower development potential. The Convention on the Rights of Persons with

Disabilities, ratified in Brazil, has been based on the precepts of the Universal Declaration of Human Rights, and yet, little progress has been made in this area<sup>(3)</sup>.

Regarding the change from the positive form to the negative form of the questions, other studies were considered, when the respective instruments were applied to the target populations<sup>(21-22)</sup>. Even knowing the difficulty of the interviewees to understand and, consequently, to answer the items in a negative way, this change was chosen because it presents itself as a strategy used in the development of scales, in order to ensure that the respondents remain attentive to the items<sup>(22)</sup>.

With regard to lexical and grammatical correction, it was observed that few items changed; only three of the 32 items of the instrument, showing that previous validation steps have already enabled most of the necessary corrections.

## CONCLUSIONS

The results presented here indicate that the IANS-PcDFAV is mostly comprehensible and, in addition to being able to assess the health needs of people with physical, hearing and visual impairment, can identify aspects that can be intervened by managers for the improvement of health planning for this population segment.

The sample of the present study was composed of DPs that are associated in non-governmental organizations, that is, people directly or indirectly involved in movements for the rights of DPs in the State of Rio Grande do Norte. However, this factor may be a limitation, since the sample was selected for convenience, in order to take into account the methodological considerations of the study.

It should be noted that the instrument was prepared and the content was validated and it has also been validated semantically in Brazil, and therefore to be used in other countries, it should be translated and adapted.

It was concluded that it was possible to describe the semantic validation of the IANS-PcDFAV, which will be applied in the future to the person with physical, auditory and visual disability to evaluate their health needs. Subsequently, it is suggested to carry out the construct validation, through the application of the instrument to a larger sample of DPs, in order to verify, through statistical tests, the accuracy and pertinence of its use to assess the health needs of people with disabilities that can support health planning.

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