Care for People with Hearing Impairment from the Perspective of the Family Nurse
Cuidado às pessoas com deficiência auditiva sob o olhar do enfermeiro de família
Cuidado de las personas con discapacidad auditiva desde la perspectiva del enfermero de familia

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\textbf{Abstract:} Objective: To describe aspects of healthcare for people with hearing impairment based on the assessment of nurses working in family healthcare units. Method: Qualitative, descriptive, exploratory pilot study. The initial population of the study was 53 individuals, however, the sample consisted of 37 nurses, including graduates and students enrolled in the Specialization Course in Nursing in Family Health, in the Residence Modality. For the development of the research, the proposed project was assessed by a Research Ethics Committee and approved under opinion number 2.543.278. Results: Among the participants of the study, 62.16\% have seen patients with hearing impairment; 92\% reported that this service was not fully effective and only 11\% mentioned the existence of resources that ensure appropriate care; 27\% of the participants did not feel able to provide assistance to this audience and all of them perceived a need for training to provide care to people with hearing impairment. The strategy most commonly cited for this was incorporation of content in university courses. Conclusion: This analysis provides a conclusive diagnosis of insecurity, incapacity to care and unpreparedness of the healthcare unit itself, which points to the need to build and reformulate public policies for providing permanent education and maintenance of friendly institutional health environments that guarantee the structuring of a resolute service system for this population.

\textbf{Keywords:} nursing care; persons with hearing impairments; family health strategy; primary health care.
**Resumo:** Objetivo: Descrever aspectos do cuidado às pessoas com deficiência auditiva a partir da avaliação de enfermeiros atuantes na saúde da família. Método: Estudo qualitativo, descritivo, exploratório do tipo piloto. A população inicial do estudo era de 53 indivíduos, entretanto, a amostra foi de 37 enfermeiros entre egressos e alunos do Curso de Especialização em Enfermagem em Saúde da Família, na Modalidade Residência. Para o desenvolvimento da investigação, o projeto proposto foi avaliado por um Comitê de Ética em Pesquisa e aprovado sob número de parecer 2.543.278. Resultados: 62,16% dos participantes já atenderam pacientes com deficiência auditiva; 92% relataram que este atendimento não foi totalmente eficaz e apenas 11% mencionaram a existência de recursos que garantiam um atendimento adequado; 27% dos participantes não se sentiam aptos para prestar assistência a este público e todos perceberam a necessidade de qualificação para efetuar o cuidado à pessoa com deficiência auditiva, sendo que a estratégia mais citada foi a incorporação de conteúdos na graduação. Conclusão: Esta análise foi responsável por um diagnóstico conclusivo de insegurança, incapacidade de atendimento e despreparo da própria unidade de saúde, o que aponta para a necessidade de construção e reformulação de políticas públicas de educação permanente e de manutenção de ambientes institucionais de saúde amigáveis que possam garantir a estruturação de um sistema de atendimento resolutivo à esta população.

**Palavras-chave:** cuidados de enfermagem; pessoas com deficiência auditiva; estratégia saúde da família; atenção primária à saúde.

**Resumen:** Objetivo: Describir aspectos del cuidado a personas con discapacidad auditiva a partir de la evaluación de enfermeros que trabajan en salud familiar. Método: Estudio piloto exploratorio, cualitativo, descriptivo. La población inicial del estudio fue de 53 individuos, sin embargo, la muestra estuvo conformada por 37 enfermeros, entre egresados y estudiantes del Curso de Especialización en Enfermería en Salud de la Familia, en la Modalidad Residencia. Para el desarrollo de la investigación, el proyecto propuesto fue evaluado por un Comité de Ética en Investigación y aprobado bajo el dictamen número 2.543.278. Resultados: 62,16% de los participantes ha atendido a pacientes con discapacidad auditiva; El 92% informó que este servicio no era plenamente efectivo y solo el 11% mencionó la existencia de recursos que aseguren una atención adecuada; 27% de los participantes no se sintió capaz de brindar asistencia a este público y todos percibieron la necesidad de capacitación para brindar atención a personas con discapacidad auditiva, y la estrategia más citada fue la incorporación de contenidos en la graduación. Conclusión: Este análisis fue responsable de un diagnóstico concluyente de inseguridad, incapacidad de atención y falta de preparación de la propia unidad de salud, lo que apunta a la necesidad de construir y reformular políticas públicas de educación permanente y mantenimiento de ambientes institucionales de salud amigables que garanticen la estructuración de un sistema de servicio decidido para esta población.

**Palabras claves:** atención de enfermería; personas con deficiencia auditiva; estrategia de salud familiar; atención primaria de salud.

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Introduction

This research aims to describe aspects of healthcare for hearing-impaired individuals based on the assessment of nurses working in family healthcare units. It is important to note that there are still many difficulties related to the care of this target public and among the main factors observed is healthcare professionals’ lack of qualification to communicate and deliver humanized care to these users.\(^{(1)}\)

In a worldwide context, 5% of the global population are affected by disabling hearing impairments, almost 470 million people, and this number is expected to reach 900 million by 2050.\(^{(2)}\) In the Brazilian scenario, the demographic census\(^{(3)}\) shows that 45.6 million Brazilians, 23.9% of the total population, have at least one type of disability; however, the percentage of individuals whose capability to function in society is compromised is 8.2%, and 1.1% present profound deafness.\(^{(4)}\)

Hearing-impaired people face numerous difficulties in accessing health services, as the sense of hearing is fundamental to obtaining and using language, and hearing impairments interfere specifically in the receipt of oral information, in maintaining bonds with health professionals and in understanding the health-disease process.\(^{(5)}\) Furthermore, the situational diagnosis shows that this population, due to difficulties imposed by social adaptation to their limitations, commonly presents lower levels of education and income when compared to the non-deaf population.\(^{(6)}\)

In this sense, the ESF Residency program is a great ally, since one of the fundamental roles of this type of qualification is to promote continuing education practices in healthcare. These practices should be based on the professionals’ own practical experience.\(^{(7,8)}\) However, it is necessary to emphasize that residency programs do not always contemplate training for delivering care to vulnerable groups such as people with disabilities, particularly in view of the shortage of professionals who are equipped to cooperate in qualifying students for this type of care.

It should be noted that while the National Primary Healthcare Policy (Política Nacional de Atenção Básica – PNAB) in Brazil addresses the necessary infrastructure for the care of people with disabilities, it does not emphasize the training of human resources for this care, and this may potentially prevent individuals with specific needs from accessing health services.\(^{(9)}\)

Difficulties in providing assistance, caring for, and building a bond with hearing-impaired individuals are perceived in several parts of the world. In the United States, deaf users have been found to be a three times less likely to be able to schedule an appointment than non-deaf individuals.\(^{(10)}\) In a study conducted in England, 44% of deaf users considered primary care insufficient for their needs.\(^{(11)}\)

The rationale for this research is anchored in the need for studies that address the care of people with hearing loss and the maintenance of communication with these individuals, since these practices represent a great challenge for health professionals and for provision of
humanized care. It is important to highlight that nurses need to actively participate in the rehabilitation teams, promoting health education, rehabilitation and self-care, as well as developing critical transitive awareness to facilitate social inclusion.

Notwithstanding this, the scarcity of studies that address the subject is noteworthy. Care for hearing impaired individuals is still inadequately explored in scientific literature, and when it comes to the involvement of resident nurses, it is totally inexistent.

In the scope of their practice, nurses working in the Family Health System (FHS) are required to combine humanistic dimensions of care that range from receiving patients to performing managerial activities and implementing nursing care. In addition, an efficient communication process between nurse, patient and family supports the delivery of humanistic and personalized care consistent with the needs of the patient.

**Methods**

Qualitative, descriptive, exploratory pilot study. The setting for the study was a Specialization Course in Family Health Nursing - Residency Modality of a public higher education institution in the state of Rio de Janeiro, Brazil, and the data was collected between the months of July and September 2018.

The study population was composed of 53 individuals among egresses and students of the Specialization Course in Family Health Nursing - Residency Modality. The inclusion criterion for participants was their prior participation in a course held in the second year of residency, entitled "Primary Care Clinic: Individual, Family and Community in the Perspective of Lines of Care I". This course focuses on the content of the systematization of nursing care, family approach and nursing consultations to individuals and their families in all life cycles, including vulnerable groups such as people with disabilities.

The convenience sample included 37 participants, of which 21 were resident nurses from the Specialization Course in Family Health Nursing - Residency Modality and 16 were nurses that had graduated from the program, according to their availability of time and interest in participating in the research.

To collect the data, an online questionnaire was prepared with open and closed questions based on the guidelines of the National Policy for the Health of People with Disabilities. This questionnaire was developed by the researchers and was divided into three parts. The first part focuses on the participant’s identification, and contains four questions. The second part presents five questions that provide further details on the profile of the professionals, while the third part contains twenty questions to obtain information about care for hearing-impaired people. The data collection instrument was developed using the Google Forms tool and sent by email to each participant with the consent of the course’s pedagogical coordination.

The answers were organized into Microsoft Office Excel® spreadsheets, and the variables were drawn based on information ranging from sociodemographic characteristics to the care profile of these professionals. The variables that stand out in this research are: age, gender, employment, ethnicity, training institution, preparation of the unit for care, personal preparation for care.

Simple descriptive statistics were used for the analysis, with the support of the IBM SPSS Statistics® 20 program for the closed questions. This helped in the construction of the tables as well as in the organization of the data. For the open questions, categorical thematic content analysis was employed, where the construction of categories was similar to the analysis variables.
This study was reviewed and approved by the Research Ethics Committee of Rio de Janeiro State University, under opinion number 2.543.278. After the ethical approval, the participants were invited to answer the survey by means of an e-mail message containing an electronic address that directed them to the instrument. The entire process was anonymous, since the participants did not need at any moment to provide any kind of personal identification when sending data, and the information was only linked to the e-mail address they provided when signing the Informed Consent Form (ICF), which was also completed online. The participants had access to the researchers' contact information, as well as to that of the ethics committee that evaluated the project. They were informed that any doubts regarding their participation could be clarified at any moment and that the withdrawal of the participant from the study would not imply any harm, either to the research or to the participant.

The database generated by the responses was shared only among the researchers and will be extinguished five years after the collection of the information, according to the current Brazilian legislation. This study complies with all guidelines and standards for research involving human subjects set forth in Resolution No. 466/2012. \(^{16}\)

**Results**

A total of 37 online questionnaires were answered by resident nurses (56.76%) and graduates (43.24%) of the Specialization Course in the FHS Nursing Residency Modality. Of these, 34 (91.89%) questionnaires were answered by female participants and 3 (8.1%) were answered by male participants. Among the 37 nurses participating in the research, 27 (72.97%) were over 25 years old. Most of the participants declared themselves as brown (37.84%) and white (37.84%). Table 1 shows this data more clearly.
Table 1: Distribution of participants according to age group, gender, and ethnicity. Rio de Janeiro, 2019

<table>
<thead>
<tr>
<th>Variables</th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>Age Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21 to under 23</td>
<td>4</td>
<td>10.81</td>
<td>-</td>
</tr>
<tr>
<td>23 to under 25</td>
<td>6</td>
<td>16.22</td>
<td>-</td>
</tr>
<tr>
<td>Above 25</td>
<td>24</td>
<td>64.86</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>34</td>
<td>91.89</td>
<td>3</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brown</td>
<td>13</td>
<td>35.14</td>
<td>1</td>
</tr>
<tr>
<td>White</td>
<td>13</td>
<td>35.14</td>
<td>1</td>
</tr>
<tr>
<td>Black</td>
<td>8</td>
<td>21.62</td>
<td>1</td>
</tr>
<tr>
<td>Cafuza</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cabloco</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Asian</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>Indigenous</td>
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</tr>
<tr>
<td>TOTAL</td>
<td>34</td>
<td>91.89</td>
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</tbody>
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Source: Own elaboration (2020)

Regarding the time since the research participants had graduated and their university of origin, we noticed that 56.76% graduated from public universities and that only 13% of the sample had graduated more than 5 years ago.

It was observed that 62.16% of the research participants have worked with a patient with hearing loss, whether in their Basic Health Unit (BHU) or elsewhere. However, 100% of the participants reported the absence of a guide or handbook in their unit to help them with this care.

Regarding the preparedness of the unit for caring for patients with hearing impairment, 40% of the nurses reported that there is institutional recognition of the repressed demand of hearing-impaired users in the territory, and 83% reported the existence of health promotion activities which ensure inclusion. As to the existence of suitable access to receive hearing-impaired patients, 49% of the participants state this is non-existent, and only 65% of the nurses reported perception and partial care for the specific needs of hearing-impaired people by the health team, with full care being less than 19%.

Only 11% of the participants reported the presence of resources in the Basic Health Unit to promote equity in the care of people with disabilities; of these, 50% reported the presence of elevators/ramps; 25% reported the availability of transportation to exams and appointments, and another participant reported home care through visits as a resource used by their unit.
The study showed that for 92% of the participants, the assistance offered to hearing-impaired individuals by the FHS units is not effective. The main reasons reported for this deficit were the lack of professional training and the absence of material and human resources. For 75.68% of the participants, hearing-impaired individuals received insufficient content in the educational actions when compared to the population without hearing impairment.

With regard to the care provided by nurses to hearing-impaired individuals, only 4.35% of the participants stated they had no difficulties in performing care activities. Language was considered a major difficulty by 34.78% of the participants, who reported that the educational actions were the most negatively affected.

Concerning the nurses’ self-assessment on the care provided to persons with hearing loss, it was observed that 27% of the participants reported that they were totally unprepared for this type of care, in spite of being in the process of finishing the residency. The other participants stated they were partially prepared for this care, but this preparedness was often a result of personal experience with deaf friends and family members, and taking specific courses was a reality observed in only 21% of the sample. It is also noteworthy that only 16% of participants mentioned the residency program as a resource for training in the care of people with hearing loss.

All of the participants mentioned the urgent need for an educational strategy to offer specific qualification in caring for hearing-impaired people. Whereas the strategies cited were diverse, they all assigned this responsibility to undergraduate education, either through academic courses (44%) or university extension courses and projects (45%).

**Discussion**

Residency is a space for theoretical and practical training and qualification. Students have great expectations about the residency scenario, especially regarding expansion of their ability to improve service solvability, which is the ability to manage, minimize or extinguish problems. However, this is a major challenge, since the two years of practice cannot always cover the full complexity of the service, especially when it comes to family health. (17)

Although nurses can start residency at any time during their professional careers, in Brazil residency is strongly associated with a nurse’s first employment and is the first option for young graduates. Thus, researches on the profile of nurses who graduate from residency point out that most are very young, female professionals, with few years of training. (18)

Nevertheless, the National Health Policy for Persons with Disabilities defines as its general purposes a wide range of possibilities that span from the prevention of diseases to the protection of health, including rehabilitation; protecting the health of persons with disabilities; and rehabilitating persons with disabilities in their functional capacities and human performance, contributing to their inclusion in all spheres of social life. (14) At a global level, we should remember that goal number 3 of the 2030 Agenda for Sustainable Development addresses activities to promote health and ensure well-being for people of all ages, including those with disabilities. (19)

In order to implement the Health Care Network for Persons with Disabilities, the qualification of professionals is absolutely necessary, as is the commitment of healthcare managers to promoting actions, services and partnerships that can meet the health-related needs of this target public. (20,21) Despite being intuitive strategies, such actions still constitute a daunting challenge for developing countries. This contributes to the
marginalization of this population and results in reinforcing the limitations imposed on integral care. (22)

An enhancement of this service should be focused on the organization of the Network and on integral health care, contemplating the areas of hearing, physical, visual, and intellectual disabilities, autism spectrum disorders, and ostomies, expanding the connections and the integration between the rehabilitation services, the primary care network and other specialized care facilities. It is therefore necessary to recognize the health situation of people with disabilities served by the Family Health Strategy. This requires sensitizing health professionals regarding the general and specific needs of this population, since this is the first step toward the implementation of an effective care plan. (23)

However, the current barriers that obstruct the care of people with disabilities in the FHS are worrisome, as most participants noted that they do not have access to or the means to provide services and promote health as a whole, without any detriment to the care process. This result is shared by other studies that indicate that the care of hearing impaired patients is a great challenge to public health worldwide, requiring an interdisciplinary, intersectoral and creative effort to ensure the completeness of care. (24–28)

It should be noted that the Family Health System is the primary care level that is closest to individuals and families and thus health professionals need to be aware of and develop healthcare programs that can meet the actual needs of this population.

For this reason, it is essential that nurses be able to communicate effectively with this target audience. This in itself is considered a major challenge for health professionals, given the participants' reports regarding the lack of technical qualification for this purpose. In this sense, the service delivered is greatly affected and this impact is felt at all stages, from the establishment of the link to the implementation of care. (29)

In order for the nursing care to be fully effective, maintaining conscious communication is crucial. It requires great effort to decode, decipher and understand the meaning of the message that patients want to transmit, because only then is it possible to identify the needs of these patients so that the nursing professional can help them. (30) It is essential that these individuals be included in the activities of the Family Health Strategy as this service provides the first contact with the user, and when necessary, it is the main mechanism for referrals to specialized services. (31)

Although professionals adopt non-verbal strategies in the care of hearing-impaired people, failures in the communication and interaction with these patients demonstrate the need for attention and training so that the care delivered is not compromised. (29) The assistance offered is not perceived to be effective. The lack of professional qualification aligns with the lack of training in sign language, which is considered a decisive tool in the development of hearing-impaired people’s discursive formations, and the understanding of their discourse by health professionals creates a greater comprehension of what constitutes the identity of deaf people, a key point for improving the quality of the services provided. (32)

The difficulties in the care for hearing-impaired persons have been reported by other studies, where a possible solution pointed out was the inclusion of a of sign language course in the course curricula for health professionals, either in basic training, undergraduate course or in advanced training as in specializations. (33, 34)

Another possibility for the inclusion of these users in the healthcare system is the incorporation of a translator that could aid communication between individuals and healthcare professionals. It is valid to say that actions like this demand a high government investment, however, they can equalize access to health care between deaf and non-deaf individuals. (35)
Initiatives such as the creation of specific outpatient clinics for hearing-impaired users have also been considered successful. In France, this type of initiative has led to a twofold increase in the yearly number of appointments.\(^{(36)}\)

Based on the perception that there is a deficit in the care delivered to this population, it has been observed that a large portion of the participants view a need for the inclusion of theoretical and practical resources in undergraduate nursing courses, and the study also shows a particularly evident demand for regular and extension courses that familiarize nursing professionals with the issue and qualify them to provide effective assistance to hearing-impaired persons.

**Conclusion**

The nurses have identified that the assistance delivered to persons with hearing impairment is inefficient, evidencing mainly the lack of professional training and a shortage of human and material resources for providing this care, as a large portion of residents and graduates perceive that they do not feel able to provide this assistance.

These findings reinforce the importance of training for professionals who have already graduated, and of reorganizing the curricula of nursing courses, in order to enhance the solvability of the assistance to persons with hearing loss in the FHS, focusing on the accommodation and learning of effective forms of communication.

It is imperative that we find ways to qualify health professionals and to adapt the care environment in health units, ensuring assistance to all citizens and in the entire service network, especially those who for physical or psychological reasons have conditions that require special care practices or strategies.

It is also noteworthy that within the scope of residency in family health, this analysis has been responsible for a conclusive diagnosis of health units’ lack of confidence, lack of capacity to provide appropriate care, and lack of preparedness, which points to the need to develop and reformulate public policies for permanent education and maintenance of friendly institutional health environments that can guarantee the structuring of a system of solvable care for this population.
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**Contribution of the authors:** a) Study conception and design, b) Data acquisition, c) Data analysis and interpretation, d) Writing of the manuscript, e) Critical review of the manuscript.

K. D. S. D. S. has contributed in a, b, c, d; L. P. S. S. in a, b, c, d; M. G. D. A. F. in a, c, d, e; P. S. B. in a, c, d, e; P. C. D. S. T. in a, e; L. V. V. A. in a, e.

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