ABSTRACT

Purpose: To know the perception of the Community Health Workers (CHW) about the speech and language disorders. Methods: Cross-sectional study, which involved a questionnaire with questions related to the knowledge of CHW on speech and language disorders. The research was carried out with CHW allocated in the Centro Sanitary District of Florianópolis. Results: We interviewed 35 CHW, being mostly (80%) female gender, with an average age of 47 years (standard deviation = 2.09 years). From the total number of interviewed professionals, 57% said that they knew the work of the speech therapist, 57% believe that there is no relationship between chronic diseases and speech therapy and 97% who think the participation of Speech, Hearing and Language Sciences is important in primary care. As for capacity development, 88% of CHW claim not to have had any training performed by a speech therapist, 75% of professionals stated they had done the training Estratégia Amamenta e Alimenta Brasil, 57% of the Programa Capital Criança and 41% of the Programa Capital Idoso. Conclusion: The knowledge of CHW about the work of a speech therapist is still limited, but the importance of speech and language disorders is recognized in primary care. The lack of knowledge, with regard to speech and language disorders, may be related to lack of qualification of the CHW in actions and/or continuing education courses that could clarify and educate these professionals to identify and better educate the population in their home visits. This study highlights the need for further research on training actions of these professionals.
INTRODUCTION

The Community Health Worker (CHW) is characterized as one of the most important connections between the health service and the community since this professional knows the living conditions and problems faced by the population in the assisted area. CHW gives support in solving the actual demands presented by users of the system and they are also essential for strengthening the Unified Health System (UHS)\(^1\).

In 1991, CHW work was incorporated to the Unified Health System (UHS) with the creation of Programa de Agentes Comunitários de Saúde (PACS) - the Community Health Workers Program (CHWP). According to the National Policy of Primary Care (NPPC)\(^2\), CHWP aimed at consolidating and qualifying the Estratégia Saúde da Família - Family Health Strategy (FHS) as a model of primary care and originator center of the health care networks for UHS.

The function of CHW in the community is essential because of the easy access to users in the area of activity, which enables them the early identification of at risk situations\(^3\). CHW may represent an important tool for promoting health, preventing diseases and Noncommunicable Diseases (NCD), since they are already inserted in multidisciplinary teams. Then, health education should be encouraged through practice and training workshops, establishing meaningful actions in health\(^4-8\).

According to the World Health Organization (WHO)\(^9\), the main NCD are cardiovascular diseases (cerebrovascular and ischemic ones), neoplasics, chronic respiratory diseases and diabetes mellitus. Other conditions that may contribute to the suffering of individuals are mental and neurological disorders, bone and joint diseases, oral diseases, genetic disorders and ocular and auditory disorders.

With the significant increase in NCD, the Ministry of Health (MH)\(^10\) has implemented surveillance activities that allow to know the distribution, magnitude and trend of these diseases. In Florianópolis, the surveillance actions in health are carried out to ensure the promotion, protection, recovery and rehabilitation of health and prevention to risks and problems regarding health at all levels of complexity\(^11\). Thus, some programs in primary care were implemented, such as: Capital Idoso, Floripa Ativa and Capital Criança, the latter incorporated into Estratégia Amamenta and Alimenta Brasil.

Given that speech and language disorders resulting from NCD represent an impact on the quality of life of the population, the knowledge about these disorders is essential in the planning of health actions. Among the main speech and language disorders, it is possible to include: hearing impairment, language disorders (aphasia, dysarthria, apraxia) and swallowing difficulties (dysphagia). Therefore, this study aims to know the perception of CHW about to speech and language disorders.

METHODS

This is a cross-sectional study with Community Health Workers (CHW) who worked at Health Centers (HC) belonging to the Centro Sanitary District in Florianópolis, and it was carried out from January to April 2015.

The city of Florianópolis has a population of 421,203 inhabitants and it is divided into five health districts, namely: Centro, Contiente, Norte, Leste and Sul\(^12\). With regard to the Centro Sanitary District, it is consisted of five HC: Agronômica, Centro, Trindade, Prainha and Monte Serrat.

This study was part of a research project entitled Fonoaudiologia e SUS: Contribuições Fonoaudiológicas na Vigilância de Agravos Não Transmissíveis – Speech, Hearing and Language Sciences and UHS: Speech, Hearing and Language Contributions in Surveillance of Noncommunicable Diseases, approved by the Human Research Ethics Committee of Universidade Estadual do Estado de Santa Catarina (UDESC), according to Opinion 1,018,426.

A questionnaire involving issues related to speech and language disorders was designed with the aim of observing if the guidelines which were performed by CHW involved such issues. The questionnaire was divided into topics regarding the promotion of maternal and infant health (guidance directed to exclusive breastfeeding and its importance for suction and nasal breathing, training in primary care programs and referrals); promotion of child health (frequency of visits, speech development, learning disability, attention and concentration, knowledge of the Neonatal Hearing Screening and Frenulum of Tongue Evaluation and training in primary care programs); and promotion of the elderly health (frequency of visits, hearing difficulties, swallowing, voice, speech, exams and use of hearing aids and training in primary care programs).

Initially, the HC coordinators were contacted and informed about the research aims. Thus, information was obtained on the division of territory, number of CHW and, afterwards, dates for interviews with all CHW of each HC were determined. The coordinators of HC performed prior appointment with CHW, usually at the beginning of business hours and, at this moment, the researcher introduced herself to the HC in order to conduct the interviews. The questionnaire was conducted in more than one meeting, according to the schedule set by each HC. CHW were invited to participate and to sign the Informed Consent Form. They were also asked to answer the questionnaire individually, and the researcher accompanied the filling process and clarified the doubts.

Data were collected and stored in Microsoft Excel\(^®\) software. Descriptive statistical analysis was performed to characterize the HS according to territory, micro areas, health markers, CHW, enrolled population and to describe the percentages referring to the instructions given by the CHW regarding the speech-language aspects. Spearman’s Association Test was carried out for nonparametric samples, in order to verify possible associations between perceptions of CHW and sociodemographic features, with 5% significance level. The analyzes were performed with the assistance of STATA 10.0.

RESULTS

At the Centro Sanitary District, there are 50 Community Health Workers (CHW). 35 of them (70%) participated of the research. This loss of 30% can be justified by the fact that some
of CHW were on vacation, were removed from office due to illness or for training and refusal to participate. 

_Agronômica_ HC is the one which concentrates most of CHW (30%). Together, HC comprise a population of 90,601 inhabitants, and the majority of the population is on the Centro HC (Table 1).

Regarding health markers, we observed a higher prevalence of Systemic Arterial Hypertension and Diabetes (95%), followed by 43% related to vulnerable population: children and pregnant women. It is noteworthy that only 23% of CHW reported elderly people as a health marker.

Most CHW were female (80%) with a mean age of 47 years (standard deviation = 2.09 years). It was observed that 60% have Secondary Education; 31.5% have Higher Education; and 8.5% had concluded Elementary School. The average operating time of the health team was 12 years. Only 30% reported being approved in a public contest (Table 2).

In relation to the frequency of meetings of the health teams, 97% of CHW answered that they occurred at least once a week. From the total number of interviewed agents, 57% know the work of a speech therapist, but 96.8% have never had any training done by this professional. Regarding the relationship between chronic diseases and speech and language disorders, more than half (57%) believes that there is no relationship. And in relation to the participation of the speech therapist in primary care, 97% of CHW reported that it is very important.

With regard to Maternal and Infant Health Promotion, most of the professionals perform questioned guidelines, and the vast majority (97%) claimed to focus on the importance of exclusive breastfeeding and 90% on the losses of artificial breastfeeding (Table 3).

Most professionals (94%) perform referrals when they find difficulties in maternal and infant feeding, being these referrals made directly to the Health Center (65%), for healthcare professionals (30%) and for groups (5%).

Regarding the Child Health Promotion, 97% of agents reported that there is periodicity in visits in households with children, and, according to 72% of them, such visits used to occur monthly. During these visits, most of the questioned guidelines used to be performed, with the exception of questioning made about the Frenulum of Tongue Evaluation (21% - Table 4).

With regard to the Elderly Health Promotion, 88% of the professional mentioned that there is periodicity in visits to households with elderly people, and, according to 67% of them, these visits used to occur monthly. Only 41% of CHW claimed to have participated in some training of the _Programa Capital Idoso_.

About the questions asked during visits in households with elderly people, we observed small percentages concerning the guidelines in relation to speech difficulties (49%); difficulties in understanding television (45%); the elderly people were

---

**Table 1. Characterization of the Health Centers of Centro Sanitary District**

<table>
<thead>
<tr>
<th>HC</th>
<th>CHW</th>
<th>Population of the territory</th>
<th>Micro-areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agronômica</td>
<td>15</td>
<td>17,272</td>
<td>690, 691, 692, 693</td>
</tr>
<tr>
<td>Centro</td>
<td>12</td>
<td>34,962</td>
<td>950, 951, 952</td>
</tr>
<tr>
<td>Trindade</td>
<td>4</td>
<td>22,160</td>
<td>850, 851, 852, 853</td>
</tr>
<tr>
<td>Prainha</td>
<td>12</td>
<td>6,839</td>
<td>130, 131, 132</td>
</tr>
<tr>
<td>Monte Serrat</td>
<td>7</td>
<td>9,368</td>
<td>120, 121, 122</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>50</td>
<td><strong>90,601</strong></td>
<td>-</td>
</tr>
</tbody>
</table>

(n=35)

---

**Table 2. CHW Socio-demographic characterization**

<table>
<thead>
<tr>
<th>Gender</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>28 (80%)</td>
</tr>
<tr>
<td>Male</td>
<td>7 (20%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 29</td>
<td>1 (2.8%)</td>
</tr>
<tr>
<td>29-39</td>
<td>7 (20%)</td>
</tr>
<tr>
<td>40-49</td>
<td>10 (28.5%)</td>
</tr>
<tr>
<td>&gt; 50</td>
<td>13 (37%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education Level</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School</td>
<td>3 (8.5%)</td>
</tr>
<tr>
<td>High School</td>
<td>21 (60%)</td>
</tr>
<tr>
<td>Superior Education</td>
<td>11 (31.5%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work experience in the health team (years)</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Until 9 years</td>
<td>6 (17.2%)</td>
</tr>
<tr>
<td>&gt; 10</td>
<td>29 (82.8%)</td>
</tr>
</tbody>
</table>

(n=35)

---

**Table 3. Guidelines performed by the CHW regarding the Maternal-Infant Health Promotion**

<table>
<thead>
<tr>
<th>Maternal-Infant Health Promotion</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exclusive Breastfeeding</td>
<td>34 (97%)</td>
</tr>
<tr>
<td>Loss of Artificial Breastfeeding</td>
<td>27 (90%)</td>
</tr>
<tr>
<td>Womb Care</td>
<td>29 (88%)</td>
</tr>
<tr>
<td>Suction x Development</td>
<td>21 (72%)</td>
</tr>
<tr>
<td>Suction x Breathing</td>
<td>24 (77%)</td>
</tr>
</tbody>
</table>

(n=35)

---

**Table 4. Guidelines performed by the CHW regarding the Child Health Promotion**

<table>
<thead>
<tr>
<th>Child Health Promotion</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech Development</td>
<td>17 (62%)</td>
</tr>
<tr>
<td>Teste da orelinha</td>
<td>26 (82%)</td>
</tr>
<tr>
<td>Teste da linguinha</td>
<td>5 (21%)</td>
</tr>
<tr>
<td>Learning Difficulties</td>
<td>21 (70%)</td>
</tr>
<tr>
<td>Attention and Concentration Difficulties</td>
<td>19 (68%)</td>
</tr>
</tbody>
</table>

(n=35)
assessed about previous audiometric examination (37%); vocal change/weakness (35%); presence of choking (30% - Graphic 1).

They were also questioned about the participation of CHW in actions and/or training courses in existing programs in Florianópolis. It was verified that training for Estratégia Amamenta and Alimenta Brasil is the one that has been most prevalent (75%), although not all professionals are reached (Table 5).

No associations were observed between the perception of CHW regarding speech and language disorders and gender (p=0.188); age (p=0.707); education (p=0.320); and operating time (p=0.708).

**DISCUSSION**

Regarding health markers, the highest prevalence (95%) refers to health markers Systemic Arterial Hypertension (SAH) and Diabetes. Apart from hearing issues, it is known that SAH is one of the risk factors for Cerebral Vascular Accident (CVA), which can be responsible for the effect of aphasia, a language deficit that generates social and emotional impacts on the individual. Inside the Redes de Atenção às Urgências e Emergências of UHS, established by Ordinance MS/GM No. 2,395, 2011(13), is the Care Line in Stroke, established by Ordinance No. 665, of April 12, 2012(14), which provides on the hospitals eligibility criteria as urgent care centers for patients with CVA in UHS context. For the strengthening of this type of care, some strategies have been introduced, such as the development of actions for the recognition of CVA by the population, training of health professionals for post-hospital care, and ensuring the access to a great rehabilitation(15). Speech Therapy should be part of this process, not only during the rehabilitation, but also in structuring health education activities for this population.

In addition to these markers, the prevalence of 43%, related to the vulnerable population: children and pregnant women, and 23%, elderly people, reinforces the importance of training of the FHS regarding the speech and language disorders, in order to carry out the health surveillance actions.

In the present study, there was a predominance of female individuals among CHW and this finding is consistent with results obtained with other research that are composed mostly by female CHW(3,16,17). The predisposition of women may also be associated with the prevalence, which is already known historically, since they play a role in society that is focused on the family care.

In Brazil, the minimum education to act as a CHW is Primary Education, regulated by(18). In the study, it was found that 60% of CHW concluded High School and 31.5%, Higher Education. This information is significant and demonstrates that the CHW is, in a way, concerned about their training. It is possible to suggest that the higher level of education of the CHW may benefit their performance, since they may be able to incorporate new knowledge and, thus, they could better orientate their territory. Furthermore, the fact that the educational level of CHW is above the minimum requirement was necessary because the required tasks have become more complex and wide(19) and thus the performance requires an adequate level of professional competence.

According to the National Primary Care Policy (Ordinance 2,488/2011)(2), among many attributions, including the ones in charge of the CHW, it is the home visit, which should be performed routinely to all families under their responsibilities. The visits of the CHW has the role to monitor and offer some guidance to families on health care, the research raised some questions about this practice that involves attention to children,
women and the elderly people, incorporating aspects related to health speech therapy.

Regarding the Mother and Infant Health Promotion, according to what points the literature of the area, participation of CHW in counseling on breastfeeding is very effective, being able to promote and encourage an increase in the duration of an exclusive breastfeeding\(^{20}\). In this study, it can be observed that the vast majority of the CHW performed guidelines focused on the importance of exclusive breastfeeding and on the damage of artificial breastfeeding.

It is considered that CHW are able to better identify their community needs by witnessing and knowing the real conditions of life and addressing the health problems of their local population\(^{21}\). In this sense, and in accordance with the Incentive Policy for the Promotion of Breastfeeding, it is expected that there is the training of the FHS team, in which the CHW is inserted.

Because of its proximity to the community, the CHW, during their visits to pregnant and lactating women, elucidate questions related to the encouragement of maternal and infant health. In a survey of knowledge and promotion practices of breastfeeding in Family Health Teams, it was verified that breastfeeding promotion activities are more performed by CHW when compared with other professionals, since such professionals carry out early visits and because they are present since the initial prenatal stage\(^{20}\). In this study, we identified a significant involvement of CHW with regard to the guidelines on: womb care during pregnancy; the importance of suction to the development of oral functions, language and hearing as well as for nasal breathing.

In relation to the Child Health Promotion, the agents are responsible for, in their home visits, to monitor the health of the child and, for this, they use Health Record of the Child as a basic instrument\(^{22}\). With it, it is possible to follow the growth and development as well as the health of children up to 10 years. The monitoring is usually performed through consultations in the Basic Health Unit (BHU) and by THE home visits that are carried out by CHW, being them responsible for collecting data and relevant information, as well as advising mothers on prevention and control of diseases and, when necessary, to make referrals to BHU\(^{23}\).

Examining the Community Agent Practical Guide of Health\(^{23}\), it is observed that the guidelines on child development are more general and the only reference found in the guide is the guidance so that if the professional mistrust of the difficulty in the speech of the child. Then, this child should be referred for an evaluation at the BHU. Although the CHW is able to identify and refer children with language disorders, there are few specific information regarding aspects related to the development of speech and academic performance (learning disabilities, attention and concentration).

Nevertheless, the CHW reported to make questions on their visits in relation to: the development of speech; learning difficulties and difficulties in attention and concentration. These results suggest that the CHW does not only support what it is proposed by the manuals. However, due to the type of the study, since it is based on self-reported knowledge, it would be possible to evaluate this knowledge with only more specific information concerning these aspects.

Regarding the knowledge of the tests that verify possible speech and language disorders, questions about the performance of the Newborn Hearing Screening (NHS) were verified and a small portion was related to the Frenulum of Tongue Evaluation. This occurrence might be explained by the fact that NHS makes part of the National Neonatal Screening Program since 2001, along with the Guthrie test and the Red Reflex Test and, thus, be more known. The low percentage of agents who carried out questioning or guidance on the Frenulum of Tongue Evaluation is due to lack of knowledge of its existence because it was recently introduced by Law 13,002 of June 20, 2014\(^{24}\). Therefore, we pointed out to the need for greater dissemination of this evaluation for health professionals, since the CHW can become an ally of the speech therapist to assist in the diagnosis and prevention of possible speech and feeding problems.

With regard to the Elderly Health Promotion, the Ministry of Health (2006) established the use of the Elderly Health Record\(^{25}\). It represents an instrument that is not only responsible for conducting the medical appointments held by the elderly individual at the HBU, but mostly as a guide for the CHW during their home visits. The Practical Guide for the Community Health Worker\(^{23}\); are described different important issues that the CHW should raise in their visits to households with elderly people. It is observed that, together with general guidelines aimed at promoting healthy habits, some issues involving speech therapy aspects are inserted.

About the questions asked during visits to households with the elderly individuals, most of the CHW claimed to ask about hearing difficulties, a fairly significant number, since the CHW have little information described in this regard in the Practical Guide of the Community Health Worker\(^{23}\). However, it is observed that there is a section of the guide that gives information about hearing disability, warning about signs that may indicate a hearing loss, including the use of the high volume of television, request for repeating words and the question that is heard but not understood. In this study, we found that the guidelines concerning the difficulties in understanding television have been little addressed by professionals. Now, in relation to the guidelines aimed to difficulties in understanding people, little more than most of CHW demonstrated a concern to clarify on this.

In contrast, when asked about the guidelines for carrying out the audiometry, just a few professionals mentioned to do this kind of guidance, although questioning about the use of hearing aids. It was observed a discrepancy in relation to these guidelines, however, despite this disparity, the study highlights the importance of early diagnosis and rehabilitation in order to ensure quality of life for the elderly individuals. Generally, after the adaptation of the hearing aid, the elderly individual tends to significantly increase his quality of life\(^{26}\). In addition, referrals to perform hearing tests should be part of routine of the professionals who work with elderly people.

According to what it is informed in the Practical Guide of the Community Health Worker\(^{23}\), it is possible to verify that the difficulties regarding swallowing and gagging are part of
the care section with the food, which are incorporated in the promotion of healthy habits. It can be seen in the manual that the CHW is oriented to clarify the elderly family on the occurrence of coughing and choking during meals, for the difficulties that they may have to chew and swallow food and the risks for aspiration. When it is verified that the elderly individual have difficulty in swallowing, it is advised the CHW to inform his healthcare team\(^\text{(27)}\). Nevertheless, it was found low percentage of orientation reports in relation to these aspects.

Among the activities carried out by the CHW during home visits, it is possible to highlight the involvement of education in health for the prevention of health complications, especially with families with elderly individuals and people with chronic health conditions. It is necessary that, if a health problem is found during home visits, the CHW should refer the elderly to the BHU, in order he goes through medical or nursing evaluation\(^\text{(28)}\).

In a study that investigated the perception of the CHW on the risks to speech therapy health, it was found from hypothetical situations listed by a questionnaire that the CHW can understand some issues that may bring possible complications to the elderly individual, among them, dysphagia\(^\text{(1)}\). Nevertheless, about 60% of the participants reported that after the perception of the risk they refer cases for discussion with the professionals of the family health team.

The guidance on vocal changes and/or weakness were little reported by the CHW, suggesting a limited professional awareness about the possible risks to speech health. In addition, many professionals can recognize changes in vocal quality, such as hoarseness and sudden frequency fluctuations, but they do not understand that these changes should be reported to the health team\(^\text{(3)}\).

About the questioning made regarding language, there were few reports of guidelines regarding difficulties in the speech of the elderly people. Opposed to a study\(^\text{(29)}\) that carried out an educational intervention with the CHW on speech therapy, it was verified that he had knowledge about the speech disorders and in his visits to the community he was able to identify them.

The study presents some limitations related to losses and the reduced size of the study population.

CONCLUSION

The CHW demonstrated to recognize the importance of the speech therapist being part of the health teams and they also demonstrated to meet some aspects related to the work of this professional, although this knowledge is limited. We observed that there is a lack of knowledge in relation to the speech and language disorders, it may be suggested that this is due to lack of training.

The findings of this study suggest that the CHW presented knowledge based on established guidelines in their training as CHW and that they also use their life experiences and their own language as the basis for their work in the community. That is necessary in order to the information passed on to the community might be clear.

However, it is considered important to carry out further research directed to the CHW, as well as training actions for these professionals, as the knowledge of the CHW regarding speech and language disorders are an important tool to support prevention, promotion and surveillance in health.

REFERENCES

respectivo incentivo financeiro e aprova a Linha de Cuidados em AVC. Diário Oficial da União; Brasília; 2011.

Author contributions
CCLSK participated in data collection, analysis and literature review; KMPV participated in the analysis and final review of the article.