Perception of community health workers regarding risks for hearing and communication disorders

Percepção de agentes comunitários de saúde sobre os riscos à saúde fonoaudiológica

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ABSTRACT

Purpose: To investigate the perception of community health workers about the aspects related to hearing and communication health of users of a family health program. Methods: Cross-sectional observational study with questionnaire application to 85 community health workers. Twenty hypothetical situations were investigated, addressing issues related to Speech-Language Pathology and Audiology present in their routine. The variables analysed were: age, work experience, education, perception of health risks in the areas of voice, orofacial myology, language and audiology. Results: The mean age of the agents was 38 years (±9.1), and their mean time of experience in the family health program was 5 years (±2.9). It was observed that 80 professionals (94%) had at least complete high school education, and all were female. Among the hypothetical situations investigated, the workers showed to have the perception of risk and attitude to take it to discussion with the team in 49% of the situations involving risks to hearing health, 53% risk to vocal health, 60% and 62% risks related to orofacial myology and language, respectively. There was no relationship between time of experience and the perception of risks. Conclusion: The community health workers have perception of many risk situations to hearing and communication health of the population, especially regarding voice and orofacial structures and functions. Community health workers need to go beyond the conceptual and procedural abilities and competencies regarding the health of human communication, because of the idea of professionals with attitudinal skills.

Keywords: Community health workers; Speech, language and hearing sciences; Health education; Family health; Unified Health System

INTRODUCTION

The Family Health Program (PSF), now called the Family Health Strategy (ESF) was established in 1994 by the Ministry of Health, from the positive results obtained by the Program of Community Health Workers (PCHW). The ESF aims to replace the traditional model of primary care while reorganizes the primary attention, in line with the principles and guidelines of the Unified Health System (SUS). It is a way to strengthen the decentralization and universal care, approaching the healthcare team and improving the quality of life¹,².

The performance of community health workers (CHW) was formalized with the creation of PCHW in 1991 with the aim of reducing infant and maternal mortality, particularly in northern and northeastern of Brazil. The duties of the CHW were defined in 1997 by Ordinance 1.886. The Decree 3.189 lays down the guidelines for the exercise of their activities in 1999. Finally, the law 10.507 of 2002, which was created in order to regulate the profession of the CHW, was repealed in 2006 so that adjustments could be made and the law 11.350 corresponds to the new regulations. It is observed that the construction of the CHW’s role within the SUS is characterized by conflict and uncertainty, since the regulation of the profession took place 11 year after it has been created³,⁴.

However, it is unquestionable the role that this professional has in the health context, as representative of the “link” between the community and health team. The community health workers reports the demands and problems faced by users of the health system and take the possible solutions to the questions and needs of...
the population\textsuperscript{5,6}. The CHW becomes knowledgeable of the conditions of life and the problems faced by local people since he lies in his area of operation\textsuperscript{7} and this is an important tool in the recognition of the determinants and condition of health in the territory\textsuperscript{6}.

According to the National Primary Care Policy (Decree 648/2006)\textsuperscript{8}, the functions of the CHW are: actions that seek the integration between health team and population; working with family’s adscription; being in permanent contact with families to develop educational actions; conducting and updating records; guiding families regarding the use of health services available; performing activities of health promotion, prevention of diseases and injuries and health surveillance; monitoring, through home visits, all the families under their responsibility and assisting in the prevention/control of malaria and dengue\textsuperscript{8}.

Considering the complexity of the CHW’s tasks, there is a relationship between the work of these professionals and the dimensions of content in education (conceptual, procedural and attitudinal)\textsuperscript{9}. This division, adopted in the Brazilian National Curriculum\textsuperscript{10} to guide the basic education, divided the skills as follow: conceptual (to know) – facts, objects or symbols that have common characteristics and allow the learning of meaning; procedural (to know how to do) – set of organized actions that let you work the ability to act effectively; attitudinal (how to be) – values, norms and attitudes that guide the daily actions\textsuperscript{11}. Regarding the performance of the CHW, it is observed that there is need for conceptual skills, referring to the theoretical domains and common sense, which allows for effective liaison between users and health professional; procedural skills, related to epidemiological surveillance activities through the identification and recording of information in records or books of records; attitudinal skills that enable the CHW to bring complaints and problem to the family health team, so that the health plan of the local area meets the demands of the enrolled population.

In this sense, it is noticed the importance of training and education of the CHW, aiming, among other things, direct the eye to a reflexive view of the reality that surround him, in order to identify the social reality and needs\textsuperscript{12,13}. The CHW must act with the principles of the SUS, particularly with respect to completeness. Completeness is understood in this study, considering the concept of integral subject, inserted in the society (which acts on it and suffers interference of it) and the user access to all levels of complexity of network actions\textsuperscript{13}.

It is essential for the CHW, in the integral perception of the subject, that they have knowledge of human communication, which is inherent in the social subject. The community health workers play a key role in the community, in particular, for ease of access to users in the territory of operation, which enables the identification of the communication difficulties of family members. In addition, CHW may, within domiciliary area, identify situations that is detrimental to users’ communication in the social and professional environment\textsuperscript{14}. It is important to the CHW the knowledge about the areas of the speech and language therapy performance (audiology, voice, language and oral myology), as well as the speech and communication disorders, events and influence in the daily lives of families.

It is necessary that the CHW has multiple knowledges and skills from a solid and permanent training, focusing on team work\textsuperscript{15} in order to perform efficiently the full awareness of the subject in the environment where he lives. There are no studies investigating the perception of community health workers about hearing and communication disorders.

The present study aimed to investigate the perception of community health workers on communication and hearing health (audiology, voice, oral myology, fluency, oral and written language) of the user population of the Family Health Program in the city of Itabira (MG), Brazil.

\section*{METHODS}

It is an observational cross-sectional study about the perception of community health workers regarding the communication and hearing health of the users of the family health program in the city of Itabira. The study was approved by the Ethics Committee of the Faculty FEAD, protocol number 144/2010. The sample consisted of all community health workers in the city, who were in full exercise of their activities. Participants (CHW) were informed of the research objectives and the voluntary nature of participation and signed a free and informed consent. It were excluded from the sample the CHW that were on vacation, away from office for health reasons or those who did not completed the questionnaire correctly.

In order to achieve the proposed objectives, a questionnaire was applied to the CHW with the objective of analyse the perception and knowledge of these professionals regarding speech and language therapy aspects in the areas of voice, oral myology, language and audiology. The instrument was previously tested in community health workers in the municipality of Lagoa Santa (MG), Brazil. Its construction was based on interviews with CHW, nurses, doctors and nursing technicians in primary care and home visits, and it was made a pilot test followed by adaptations\textsuperscript{15}.

The instrument consisted of research on characteristics such as age, gender, courses taken, work experience in the Family Health Strategy, and 20 closed questions with hypothetical situation addressing issues in speech and communication disorders in the routine of the CHW. Each question was started with the text “Arriving in a home...” followed by the description of a hypothetical situation involving the residents of the house visited by the agents. For each question, the professional had the chance to select one of three response options: Letter A: the CHW considers a normal situation, not realizing the health risk (0 points); Letter B: the CHW considers a problem situation that may lead to future changes, but does not take action (1 point); Letter C: the CHW takes the case to be discussed with the health team (2 points).

Four (20\%) of the 20 questions of the instrument represented the community everyday situation in which there isn’t health risk to residents and are considered normal situations. The remaining 16 questions represented situations involving some risks to speech and communication disorders.

The CHW responded to the questionnaire individually, in the health centres, and if there were difficulty in understanding the questions by the agents, the researchers were free to explain
the content of the question.

The variables analysed were: age of the CHW, work experience, education, and presence or not of accompaniment by professionals of the Centres for Family Health Support, perception of health risk in areas of voice, oral myology, language and audiology. As the instrument used is not standardized and it is a quiz to raise knowledge of CHW, it was created an Index of Risk Perception (IPR) in order to qualify the answers. For each CHW, it were calculated the IPR, in percentage in each area, with a maximum of 100%.

It were considered Index of Perception of Risk to Hearing Health (IPRA) the aspects listed in questions numbers 2, 6, 11, 12, 16 and 18; Index of Risk Perception related to Orofacial Myology (IPRMO) the aspects listed in the issues numbers 3, 7, 9 and 15; Index of Risk Perception to Language development (IPRLG) the aspects listed in questions numbers 8, 10, 13 and 17; Index of Risk Perception to Vocal Health (IPRV) the aspects listed in the issues numbers 5 and 19. The Index of Risk Perception (IPR) amount considered was corresponded to the arithmetic average of the sum of the index IPRA, IPRMO, IPRLG and IPRV.

A specific database for this study was created and it was assembled using EPI INFO – 6.04. For purposes of descriptive analysis it was made the distribution of the frequency of categorical variables involved in the study’s evaluation and analysis of measures of central tendency and dispersion for continuous variables. The data have previously been granted and received appropriate treatment. For statistical analysis, the ANOVA test was used with p<0.05.

RESULTS

Eighty five CHW were interviewed, and all were female. The mean age of the community health workers was 38 years (±9.1) and longevity in the PSF ranged from two months to ten years, with an average of 5.0 years (±2.9). It was observed that 80 people (94%) had at least completed high school.

Nineteen (22%) of the community health workers said that they have made training course to become a community health worker. Furthermore, 35 (41%) worked in teams with cover of Core Support in Family Health and 53 (62%) in areas without coverage of NASF.

It were obtained responses from CHW to questionnaire containing situation of possible health risks to residents because of speech and communication changes listed in the areas of voice and audiology (Chart 1). In the hypothetical situation investigated, the CHW did not realize the health risks of voice and audiology in 20% of cases, considering the situation as normal. Around 30% of cases, the risk was perceived, but would not be brought to the family health team. Around 50% of risks were perceived by the CHW and would be taken to team discussion. The use of Walkman at high volume was considered the situation of lower risk. The difficulty of auditory perception of a resident associated with intensive speech was considered the situation of higher risk perception by the agents interviewed.

Answers to questions regarding oral myology and language were also raised (Chart 2). It was noticed that feeding in the supine position represented a lower risk perception by the CHW.
and the cases of mouth breathing and dysphagia the greatest health risks. In about 60% of hypothetical situations involving health risks in the areas of language and oral myology, the CHW would act after the perception of risk, taking cases to discussion with the professional team of Family Health.

The Index of Risk Perception classified according to the speech and language areas and its relation to the time of action of the CHW in Family Health could be observed (Table 1 and 2). They indicated that the CHW could see in most cases, in hypothetical situations, that the resident’s health was at risk. The perception of the CHW was not influenced by the time of practice. These findings are of great relevance to the work of the speech and language therapist in the Family Health Strategy, which can have the community health worker as a partner in identifying risks to health intervention.

<table>
<thead>
<tr>
<th>Hypothetical situation showed to the community health worker (CHW)</th>
<th>Question’s answers</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arriving in a home</td>
<td>Normal situation</td>
<td>Perceives the risk to health without taking action</td>
<td>Take it to the team knowledge</td>
<td></td>
</tr>
<tr>
<td>You find a 4 years old child doing pacifier user and/or sucking his thumb all the time that the visit lasted.</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>You observe a 5-6 year old child always with an open mouth and dry lips</td>
<td>5</td>
<td>6</td>
<td>38</td>
<td>45</td>
</tr>
<tr>
<td>You find the housewife feeding a bedridden patient in recovery, noting that while he eats chokes several times.</td>
<td>6</td>
<td>7</td>
<td>16</td>
<td>19</td>
</tr>
<tr>
<td>You find an old being fed by his daughter patiently in the lying position.</td>
<td>17</td>
<td>20</td>
<td>31</td>
<td>36</td>
</tr>
<tr>
<td>You are talking about problems with the resident community. Notes that while talking to you, he repeats words, does a lot of breaks, is frowning and squinting.</td>
<td>14</td>
<td>17</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>You watch a game of 8-10 children. Among them, one cannot play the game because they do not understand the rules patiently taught by colleagues.</td>
<td>14</td>
<td>17</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>You watch a 4 year old who talks a lot but you do not understand anything he says.</td>
<td>5</td>
<td>6</td>
<td>23</td>
<td>27</td>
</tr>
<tr>
<td>You see a teenager doing the duty of the school, the sees that he cannot write following the line of notebook and do some exchange of letter writing.</td>
<td>10</td>
<td>12</td>
<td>29</td>
<td>34</td>
</tr>
</tbody>
</table>

Table 1. Index of risk perception according to speech and language areas of action

<table>
<thead>
<tr>
<th>Index</th>
<th>Mean value (%)</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPRA</td>
<td>64.8</td>
<td>20.0</td>
<td>41.7</td>
<td>100</td>
</tr>
<tr>
<td>IPRMO</td>
<td>74.8</td>
<td>19.5</td>
<td>37.5</td>
<td>100</td>
</tr>
<tr>
<td>IPRLG</td>
<td>73.4</td>
<td>23.4</td>
<td>12.05</td>
<td>100</td>
</tr>
<tr>
<td>IPRV</td>
<td>91.5</td>
<td>25.7</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>IPR total</td>
<td>71.9</td>
<td>16.7</td>
<td>33.03</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: IPRA = index of risk perception to hearing health; IPRMO = index of risk perception to orofacial myology health; IPRLG = index of risk perception to language development; IPRV = index of risk perception to vocal health; IPR = arithmetic mean of the sum of the index IPRA, IPRMO, IPRLG and IPRV; SD = standard deviation

Table 2. Index of risk perception according to time of practice of the community health worker of family health and the speech and language areas

<table>
<thead>
<tr>
<th>Index</th>
<th>≤5 years</th>
<th>&gt;5 years</th>
<th>Anova test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPRA</td>
<td>63.3</td>
<td>66.4</td>
<td>0.50</td>
<td>0.47</td>
</tr>
<tr>
<td>IPRMO</td>
<td>85.1</td>
<td>80.7</td>
<td>2.43</td>
<td>0.12</td>
</tr>
<tr>
<td>IPRLG</td>
<td>83.1</td>
<td>81.1</td>
<td>0.34</td>
<td>0.56</td>
</tr>
<tr>
<td>IPRV</td>
<td>91.5</td>
<td>91.9</td>
<td>0.05</td>
<td>0.83</td>
</tr>
</tbody>
</table>

ANOVA test (p≤0.05)

Note: IPRA = index of risk perception to hearing health; IPRMO = index of risk perception to orofacial myology health; IPRLG = index of risk perception to language development; IPRV = index of risk perception to vocal health
DISCUSSION

The present study was proposed to examine the perception of the CHW of risks for speech and communication disorders of people referenced by the Family Health Strategy in the municipality of Itabira (MG), Brazil. One difficulty was the lack in our country of an assessment instrument validated and suitable for the study population. Therefore, it was used an investigative questionnaire with simulated questions experienced by the CHW in their routine work\(^{(15)}\). The option is also justified by the fact that the instrument has been tested with CHW from another municipality after conducting a pilot study and it is a result of a process of joint construction by the multiple care team\(^{(15)}\).

It is expected that the CHW has specific skills besides conceptual, attitudinal and procedural skills as a key member of the Family Health Team, responsible for liaison between the community and the health service\(^{(5,6)}\). These skills were initially used in the area of basic education and have expanded to youth and adults and other areas of knowledge\(^{(10,11,16)}\).

In education, the contents are taken as having three distinct characteristics: the conceptual, procedural and attitudinal content. The conceptual contents are responsible for all construction of learning because it is holders of information: are the basis for assimilation and organization of the facts of reality. The procedural contents aimed to “how to do”, reaching a goal thought actions. In turn, the attitudinal contents provide that the subject take position before what he have seized\(^{(9,16)}\).

Analysing the data from this study in light of the concepts above, it were found that in respect to speech and language health, it is necessary that the community health worker knows the main speech and communication disorders in the community and its possible implications on the lives of individuals\(\text{(conceptual)}\). In daily routine, these professionals need to know how to examine the home environment in order to recognize the health risks that the community is exposed, making the record of the relevant findings in terms of home visits\(\text{(procedural)}\). So important as identifying is to take the information gathered for discussion with the Family Health Team to assist in tackling these problems and developing a health plan of the territory based on local demands\(\text{(attitudinal)}\).

In this study, it was possible to realize the conceptual skills of health workers in recognizing some risks such as excessive environmental noise, changes in vocal quality of the residents, deleterious oral habits and subject’s way of speaking\(\text{(Charts 1 and 2)}\). In the most of the hypothetical situations presented, the CHW showed some theoretical knowledge that allowed them to associate the situation described and the existence of a health risk. This fact is only possible from a prior existing information\(^{(17)}\). It is believed that the recent inclusion of speech and language therapist in primary care, especially in NASP\(^{(19)}\), as well as increased education of CHW\(^{(19)}\), havefavoured the spread of this knowledge. Moreover, campaigns and actions developed by speech and language therapy class entities, such as National Voice Campaign, the World Day of Stuttering, among others, and dissemination of actions by the media may have contributed to increased CHW knowledge about the profession and its action in health.

Among the hypothetical situations designed to the area of voice, it was observed that most of the agents\(\text{(CHW)}\) said to recognize voice quality changes such as hoarseness and oscillations of voice frequency. This is considered positive as hoarse voice, frequently oscillating or with failure may be primary or secondary symptoms of a voice disorder\(^{(20)}\). Although voice disorders limited the communication and cause negative impact on quality of life of individuals\(^{(20)}\), only half of the number of agents\(\text{(CHW)}\) understands that the hypothetical situation of vocal changes should be communicated to the team, which shows failures in procedural and attitudinal skills. Hoarseness is one of the main symptoms of laryngeal cancer and when diagnosed in time can prevent the loss of the vocal folds\(^{(20)}\).

The CHW showed limited perception of the health risk for speech and communication disorders in the area of language. A study with CHW showed that the agent presents a view about the practice of speech and language therapy predominantly related to clinic curative, especially to disorders of speech and writing/learning\(^{(17)}\). In the present study, a few CHW realized the risk in the presence of difficulty of writing. This perception is related to the theoretical knowledge and also the existence of certain procedural skills with regard to approach the subject and the family within their social reality\(^{(3)}\).

In the present study, it was not possible to identify the action “record of the risk” isolated from another shares of the CHW. A study conducted at the Health Centre, School of Medicine, USP, the CHW have revealed the carelessness in filling out the patient’s chart, with the occurrence of errors, such as uncertainty of dates, incongruities in registration data and lack of clarity in the record\(^{(21)}\). The study showed that, for the CHW, the record is an unpleasant work, which enhances the occurrence of errors and makes difficulty the use of data from medical records by other professionals. Some CHW did not recognize the importance of proper and accurate completion of medical records. Others, however, indicated that the record is a form of recognition of their work and therefore of utmost importance. Whereas the appropriate record is an essential procedural skill to the proper functioning of the network of health services, as well as epidemiological surveillance\(^{(22)}\), it is perceived the need to target the CHW regarding procedural skills. In the professional diary, the agent registers health problems detected in the community user, such as the presence of diabetes and hypertension. However, it becomes necessary in this record the health risks for speech and communication disorders cited in the study.

Regarding attitudinal skills, there was a tendency for CHW to take health risk identified for discussion in the team in the most of the hypothetical situation raised. This finding is sought by the Ministry of Health\(^{(8,22)}\), which assigns the tasks to the CHW as to promote the integration of the healthcare team with the population, developing health promotion activities, prevention of diseases and injuries and health surveillance, keeping the team informed about the families risks, among others.

The fact that this study has identified that the CHW have some attitudinal skills regarding vocal, language and oral myology health of service users is an improvement in the health system, before focusing on the medical model, curative. The changes are suggestive of a new model based on the user
in an integral way and in practices of prevention and health promotion. The implementation of the Support Centres of Family with the presence of speech and language therapist in the teams since 2008, as well as the age of the CHW in Itabira, whose average age is 38 years, seems to contribute to the consolidation of a professional with attitudinal skills, who stands before what he has learned and before his team. CHW who are older tend to have greater knowledge of community problems.

In the current Brazilian health context, it is important to the CHW to be proactive, able to not only identify health risks, but also take them to the team. So the team is aware of what strategies and procedures are provided within the health project planning.

Considering the practice of CHW in the context of conceptual, procedural and attitudinal skills, it has been questioned how to instigate such powers in the CHW. The answer appear to be linked to the processes of training and continuous education, even using active learning methodologies. The training of CHW must have a hybrid character, because the professional requires expertise and common sense to allow dialogue between the two spheres: the community and others health professionals.

The study showed that the CHW in Itabira possess skills that enable them to identify many of the speech and language health risks in hypothetical situations presented. However, not enough professionals realize the risk and even register it. As set out in Manual of conduct of CHW in Brazil, it is essential to the community health worker to inform the Family Health Team about the risk which the community is exposed, which consists of an attitudinal skills. It is clear, therefore, the need for investment in the process of training and continuing education, with knowledge and experience in multidisciplinary team since the CHW are essential to enable the work proposed by the regional ESF. The speech and language therapist as professional in the Support Centre for Family Health should be dedicated to closer ties with the CHW to ensure that these professionals become potential agents of education and health promotion also in the field of speech and language therapy.

It is necessary that the CHW has more than skills and conceptual and procedural powers in relation to the health of human communication. One hopes a professional with attitudinal skills to be able to inform and sensitize staff to the risks that the community is exposed in order to generate discussion and planning of health actions in the territory. It becomes necessary furthers studies to investigate the actions of the CHW in real situations of their routine work and enable the creation of health indicators in the territory of action of Family Health Team.

CONCLUSION

Community health workers of Itabira showed to be aware of many situations of risk to the health of users, especially regarding voice and orofacial structures and functions. However, the perception of risk appears to be limited to identifying the creation of health indicators in the territory of action of Family Health Team.

RESUMO

Objetivo: Investigar a percepção dos agentes comunitários sobre os aspectos relacionados à saúde fonoaudiológica da população usuária de um programa de saúde da família. Métodos: Trata-se de estudo observacional transversal com aplicação de questionário a 85 agentes comunitários. Foram investigadas 20 situações hipotéticas abordando os temas fonoaudiológicos na rotina de trabalho dos agentes. As variáveis analisadas foram: idade, tempo de atuação, escolaridade, percepção dos riscos à saúde da população nas áreas de voz, motricidade orofacial, linguagem e audiologia. Resultados: A média de idade dos agentes foi de 38 anos (±9,1), e o tempo de atuação no programa 5,0 anos (±2,9). Observou-se que 80 profissionais (94%) possuíam pelo menos o Ensino Médio completo, e todos eram do gênero feminino. Entre as situações hipotéticas investigadas, os agentes demonstraram ter a percepção do risco e atitude de levá-lo para discussão da equipe em 49% das situações envolvendo o risco à saúde auditiva, 53% saúde vocal, 60% e 62% os riscos relacionados à motricidade orofacial e linguagem, respectivamente. Não foi encontrada relação entre o tempo de atuação e a percepção do risco à saúde fonoaudiológica. Conclusão: Os agentes comunitários mostraram ter percepção de muitas situações de risco à saúde fonoaudiológica dos usuários, especialmente no que se refere à saúde vocal e das estruturas e funções orofaciais. É necessário ao agente comunitário ir além das habilidades e competências conceituais e procedimentais no que se refere à saúde da comunicação humana, pois se almeja um profissional com habilidades atitudinais.

Descritores: Agentes comunitários de saúde; Fonoaudiologia; Educação em saúde; Saúde da família; Sistema Único de Saúde

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