



## Influence of parents' communication skills on health guidelines for deaf children

*Influência da habilidade comunicacional dos pais nas orientações de saúde ao filho surdo*

*Influencia de las habilidades de comunicación de los padres en las pautas de salud para niños sordos*

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### ABSTRACT

**Objective:** to ascertain the influence of parents' communication on deaf children's reception of health information, and health behavior. **Method:** in this cross-sectional study of 110 deaf people selected by snowball sampling in municipalities in northwest Paraná state, data were collected from February to August 2019 using a structured instrument. Descriptive and inferential statistics were used in the data analysis. **Results:** most deaf people (95.4%) received some health guidance in the family; being guided about the importance of routine appointments was found to be associated with the children's attending such appointments in the prior year (OR = 3.40). The parent able to communicate in Libras was a protective factor, because in these cases, more guidance on drug use and sugar abuse occurred. **Conclusion:** the parents' communication skills enabled them to provide more health-related guidance, and this influenced their deaf children's health behavior.

**Descriptors:** Deafness; Family; Family Relations; Health Promotion; Communication.

### RESUMO

**Objetivo:** verificar a influência da comunicação dos pais no recebimento de informações e comportamento de saúde de filhos surdos. **Método:** estudo transversal realizado com 110 pessoas surdas, selecionadas com a técnica *snowball sampling*, em municípios no Noroeste do estado do Paraná. Os dados foram coletados de fevereiro a agosto de 2019, mediante aplicação de instrumento estruturado. Na análise dos dados utilizou-se a estatística descritiva e inferencial. **Resultados:** a maioria dos surdos (95,4%) recebeu alguma orientação de saúde no núcleo familiar; ser orientado sobre a importância de consultas de rotina mostrou-se associado à realização da mesma pelos filhos no último ano (OR= 3,40). O pai que sabe se comunicar em Libras constituiu fator de proteção, pois, nestes casos, ocorreram mais orientações sobre o uso de drogas e consumo abusivo de açúcar. **Conclusão:** a habilidade comunicacional dos pais possibilita que eles realizem mais orientações relacionadas à saúde e isto influencia o comportamento em saúde de filhos surdos.

**Descritores:** Surdez; Família; Relações Familiares; Promoção da Saúde; Comunicação.

### RESUMEN

**Objetivo:** determinar la influencia de la comunicación de los padres en la recepción de la información sanitaria y el comportamiento sanitario de los niños sordos. **Método:** en este estudio transversal de 110 personas sordas seleccionadas por muestreo de bola de nieve en municipios del noroeste del estado de Paraná, los datos se recolectaron de febrero a agosto de 2019 mediante un instrumento estructurado. Se utilizó estadística descriptiva e inferencial en el análisis de datos. **Resultados:** la mayoría de las personas sordas (95,4%) recibió alguna orientación sanitaria en la familia; Se descubrió que el hecho de recibir orientación sobre la importancia de las citas de rutina estaba asociado con la asistencia de los niños a dichas citas el año anterior (OR = 3,40). El padre capaz de comunicarse en Libra fue un factor de protección, porque en estos casos, hubo más orientación sobre el uso de drogas y el abuso de azúcar. **Conclusión:** las habilidades de comunicación de los padres les permitieron brindar más orientación relacionada con la salud, y esto influyó en el comportamiento de salud de sus hijos sordos.

**Descriptores:** Sordera; Familia; Relaciones Familiares; Promoción de la Salud; Comunicación.

## INTRODUCTION

Communication is fundamental for living in society, as it enables daily social interactions and interpersonal relationships<sup>1</sup>. In this context, deafness can be an important barrier to social interactions, but it can be minimized when sign language is used in communication<sup>2</sup>.

According to the literature, most deaf children are born in hearing families, who have never had any type of contact with deaf people and who are unaware of sign language<sup>3</sup>, the choice and use of communication skills that are common in the family nucleus being fundamental. As they grow, children need to acquire communication skills far beyond those used in the family, and at that moment, the most indicated is sign language, which enables them to interact with their peers<sup>4</sup>.

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Some parents of deaf people, however, have a lot of difficulty and find it frustrating that they have to learn sign language to communicate with their children. Others consider it not possible to use oral language with their family member, and therefore choose to employ a combination of signs or gestures with writing<sup>5</sup>.

Effective parenting is substantial for the intellectual, social, physical and emotional development of a person. Parental dimensions can influence the personality of a deaf child in the future and reflect low or high self-esteem at other life stages. Therefore, deaf children can become successful adults with the help of their parents<sup>6</sup>.

This is also applicable in relation to health behaviors. That is, parents of deaf people have great responsibility for the health condition of their children, not only while they are children because, in general, there is no equality in their access to health-related information. Even though there are laws and decrees in the Brazilian legal system that ensure that deaf people are provided with health services that meet their communication needs, they are not sufficient to eliminate communication barriers and ensure that they occur with quality<sup>7</sup>.

In health facilities, there are usually no interpreters, and most of the health professionals do not know how to communicate with deaf people. For these reasons, the deaf population has more difficulty in accessing health promotion and disease prevention actions. Moreover, health campaigns are often not available in sign language or in formats accessible to that population<sup>8</sup>. These aspects, isolated or associated, can contribute to the communication barriers existing in the family nucleus hinder health guidelines even more for deaf people.

In this context, the question is the following: Do the communication skills of parents enable their deaf children to have more access to health information? To answer this question, the objective of the study was to verify the influence of parents' communication on the receipt of information and health behavior of deaf children.

## LITERATURE REVIEW

Health promotion is a public policy strategy aimed at individual and collective care, aiming at autonomy, quality of life and incentive to self-care<sup>9</sup>. However, this public policy does not affect the deaf population with equality, which makes this public more susceptible to the development of avoidable health problems, and also leads to complications of chronic conditions, due to delay or under diagnosis and undertreatment<sup>10</sup>.

Communication in the Brazilian Sign Language (Libras) by the family of a deaf person is substantial so that education, guidance, health care and exchange of experiences occur appropriately. When family members do not know how to communicate in Libras, they have more insecurity in passing on information and guidelines related to health promotion and disease prevention, reflecting on limited knowledge of the deaf about the disease-health process<sup>11</sup>.

The communication skills employed by deaf people also influence the care provided in the health services. Deaf people who only use sign language are more likely to not understand their diagnosis, while oral or bilingual ones are more likely to understand the health professional, their treatment and diagnosis. The communication strategies used by the professionals, such as the use of oralization and written Portuguese, were pointed out by deaf people who only communicate by signs as the most harmful in the interaction between health professionals and the deaf<sup>12</sup>.

When compared to hearing people, it is perceived that deaf individuals indulge in health risk behaviors more frequently: sedentary lifestyle, obesity and failure to perform adequate treatment for cardiovascular diseases<sup>10</sup>. Thus, the importance is highlighted of this population having inclusive health care, with quality and equality, so that self-care, promotion, recovery and rehabilitation of health can occur<sup>13</sup>.

## METHOD

This cross-sectional study was developed with deaf people living in municipalities related to the Main Population Arrangement (MPA) of the metropolitan region of Maringá (MRM), in the Northwest region of the state of Paraná<sup>14</sup>.

To locate the possible participants, the association of deaf people of the city was contacted, considering that the deaf constitute a population of difficult access and measurement. However, the institution only performs spontaneous demand visits, with activities scheduled sporadically. Thus, it was decided to use the non-probabilistic sampling technique, snowball sampling, which assumes that individuals with common characteristics have bonds and are



connected to a social network<sup>15</sup> and, for this very part, tend to be identified more easily by other members of their social network than by researchers<sup>16</sup>.

The inclusion criteria adopted were as follows: being 18 years old or older, with profound hearing loss since childhood and knowing how to communicate in Libras. In turn, the only exclusion criterion adopted was the presence of some cognitive disorder (reported by close family members), which occurred in two cases.

The first recruitment occurred during the intention of the main researcher in a lecture referred to in an association, in which eight deaf individuals were present, two of whom agreed to participate in the research and indicated five other people, who probably could agree to participate. At the same time, the search for people who, in their profile, identified themselves as deaf and residents of the municipalities under study, was initiated on the *Facebook* social network, and they were sent an "in box" invitation. If they accepted, the date, time and place most convenient to the participant for data collection were defined, which occurred in public spaces of easy access, homes and commercial establishments (shopping malls and supermarkets).

It should be emphasized that, at the end of each meeting, other possible participants were suggested and so on, until the moment when all accessible members had already been contacted and the indications became repetitive<sup>15</sup>. In total, 263 people were invited to participate in the study, of which 151 did not accept and two were excluded. Thus, the sample studied consisted of 110 individuals.

Data was collected from February to August 2019, through the application of an instrument by the main researcher, who is trained in Libras. The instrument used in the structured data collection contained four parts. The first addressed sociodemographic characteristics: age, gender, race, schooling, paid work, marital status, deaf partner and use of orthotics. The second part consisted of variables related to communication: age at which they began to communicate in Libras; ability to do lip reading; use of oralized communication; perception of family communication; understanding of the Portuguese language; communication in writing with those who do not know Libras; mother communicates in Libras and father communicates in Libras. The third part referred to family guidelines related to eating habits, with dichotomous answers. Finally, the fourth part contained questions about lifestyle, also with dichotomous answers.

The data were typed and stored in an *Excel*<sup>®</sup> spreadsheet and analyzed with the aid of descriptive and inferential statistics in SAS (Statistical Analysis Software), version 9.4. The Odds Ratio was considered as a measure of association, with a 95% confidence interval, being calculated from the adjustment of the logistic regression model.

The study project was approved by the research ethics committee with human beings of the signatory institution (Opinion No. 2,959,112) and all the participants signed the Free and Informed Consent Form (TCLE) in two copies.

## RESULTS

The 110 deaf people in the study were between 18 and 73 years old (mean of 35 years old  $\pm$  11.5), just over half were female (51.8%), white-skinned (62.7%), 45.5% had completed high school, 69.1% were inserted in the labor market, 70.0% had a partner, and in 61.7% of these the partner was also deaf. Regarding deafness, 44.5% reported that the diagnosis occurred soon after birth, and for the others, around one year (20.9%), two years (14.5%), three years (8.2%), four years (5.4%) and from five to 12 years (6.4%). The age at which they began to communicate in Libras ranged from one to 42 years old, with a mean of 9.9 years old.

It was observed that, in 18.3% of the cases, the fathers communicate in Libras, and that in 44.9% only the mothers use this linguistic modality. In addition, female children were four times more likely (OR=4.22; 95% CI: 1.41-12.62; p-value=0.0101) for the father not knowing how to communicate in Libras.

In addition to Libras, the participants also reported using other communication skills, and 46.4% used lip reading (another 40.9% sometimes manage to), 34.5% had oral communication (another 39.1% manage to); and 16.5% understood the Portuguese written language (another 66.1% sometimes manage to). It was verified that 41.28% considered family communication good; 31.2%, very bad/bad/regular; and 27.5%, great.

Regarding health guidelines in the family nucleus, it was verified that the majority (95.4%) reported receiving some type of guidance (Table 1), and that children whose parents advise on the importance of routine consultations were three times more likely to having performed them in the last year (OR=3.40; 95% CI: 1.53-7.55; p-value=0.0042).

**TABLE 1:** Health guidelines in the family nucleus of deaf people. Municipalities with main population arrangement of the metropolitan region of Maringá, PR, Brazil, 2019.

<b>The family offers guidelines:</b>	<b>n</b>	<b>%</b>
Importance of water consumption	98	89.9
Importance of doing physical exercises	70	64.2
Avoiding the consumption of fried food	70	64.2
Dangers of the excessive consumption of sugar	69	63.3
Dangers of the excessive consumption of salt	68	62.4
Importance of routine consultations	60	55.0
Not using drugs	57	52.3

It was also identified that children of mothers (OR=3.00; 95% CI=1.28-6.99; p-value=0.0112) and fathers (OR=2.87; 95% CI=1.06-7.75; p-value=0.0382) who do not know how to communicate in Libras are more likely to feel nervous and stressed. (Data not presented in the table).

Table 2 shows that the father who knows how to communicate in Libras is a protective factor for the guidelines on drugs and sugar abuse.

**TABLE 2:** Association of communication in Libras by the father of deaf people to access health guidelines on the dangers of drug use and excessive sugar consumption. Municipalities with main population arrangement of the metropolitan region of Maringá, PR, Brazil, 2019.

<b>Variables</b>	<b>Father communicates in Libras</b>				<b>p-value</b>	<b>*OR</b>	<b>CI (95%)<sup>§</sup></b>
	<b>In</b>		<b>Yes</b>				
	<b>n</b>	<b>%</b>	<b>n</b>	<b>%</b>			
<b>Dangers of Drug Use</b>							
In	52	58.4	5	25.0	-	1	-
Yes	37	41.6	15	75.0	0.0101	0.237	0.079 - 0.710
<b>Dangers of the excessive consumption of sugar</b>							
<b>The family guides</b>							
In	38	42.7	2	10.0	-	1	-
Yes	51	57.3	18	90.0	0.0141	0.149	0.033 - 0.682

\*OR = Odds Ratio; CI = 95% Confidence Interval; <sup>||</sup>p-value = Significance probability.

## DISCUSSION

The fact that almost all the participants stated that they received some kind of health information from the family nucleus is certainly related to their communication skills, because the vast majority can use more than one form of communication. In this regard, a study conducted in South Africa revealed that the use of different communication modalities occurred due to the need for understanding of family members. Thus, family gestures were used in households where the families of deaf people had little or no knowledge of sign language. These gestures made interactions possible so that the deaf family member would not be isolated; however, the quality of communication was impaired due to the limitations of the informal gesture employed, failures in this and the consequent superficiality in the interaction<sup>3</sup>. These characteristics should also be present in the families of a portion of the participants in this study, since 31.2% consider very bad/bad/regular family communication.

Communication in the family nucleus is substantial because it allows for the construction of bonds, the transmission of beliefs and values and teaching to face the challenges of life. The connection between different generations can contribute to the development of resilience at all life stages<sup>17</sup>. A study conducted in Massachusetts (USA) identified that the absence of accessible communication with hearing parents is a common trauma experienced during childhood by deaf adults<sup>18</sup>.

It was observed that, when parents do not communicate in Libras, deaf people are more likely to feel nervous and stressed. This is probably because the acute response to stress, especially if it is repeated and chronic, can impair the psychological and physiological system, causing sterile inflammation (absence of microorganisms) and systemic inflammatory response syndrome<sup>19</sup>. Thus, the use of sign language by family members, in addition to assisting family relationship and interaction, prevents the exacerbation of inflammatory disease and pain, triggered due to sterile



inflammatory responses<sup>20</sup>. Therefore, it is essential to develop strategies that guide and sensitize family members about the importance of using, within the family, adequate communication as early as possible.

Moreover, it is possible to infer that the family members interfere in the behavior of the deaf in relation to health. For example, although only a little more than half of the participants were instructed by their family members to perform routine consultations, those who did so were significantly more likely to have periodic consultations. In this sense, a study conducted with data from the Rochester Health Survey for the Deaf, 2013, verified as a possible factor responsible for the worst health conditions of the deaf the auditory quality of the parents, mediated by the option of the communication method employed towards the deaf child<sup>21</sup>.

The indirect guidelines of the family during childhood, through the telling of medical stories and general discussions about family health, are an important source of knowledge about health, a domain in which many adolescents and deaf adults present gaps<sup>22</sup>. Indirect family guidance in childhood is a central component for contextual learning opportunities that influence adult health outcomes. In this context, parents of deaf children play a fundamental role in reducing the current health disparities observed in the deaf population<sup>21</sup>.

When compared to fathers, mothers present greater effort to communicate with their children in Libras, regardless of gender. However, when the child is male, the father is more likely to communicate in Libras, which favors the transmission of health information in the family environment, as more people can collaborate in this task. In this context, there is predominance of the patriarchal family model, in which the father delegates the education of children to the woman, especially the education of daughters, considered a private responsibility of their mothers<sup>23</sup>. This barrier of parenthood and communication with children becomes even more pronounced in the context that involves deaf people. This is because, in the present study, a statistically significant association of the father to guide on sugar and drug consumption was verified, with deaf daughters being more likely to not receiving these guidelines.

These results show the importance of the health sector working with parents of deaf children to make them sensitive about the role they have in mentoring their children and how much this task can be facilitated if they can communicate in Libras. Parents are often unaware of how much they can interfere in their children's health behaviors, through guidelines and support for them to adopt healthy behaviors in relation to diet, physical activity, sleep and leisure time<sup>24</sup>.

A study conducted with hearing adolescent in the United States verified that high/good family functioning influences the adoption of preventive behaviors for chronic non-communicable diseases, because adolescents had lower chances of overweight, obesity and eating disorders. It is noted that, in the present study, it was also observed that good relationships with parents can have a greater impact on male children<sup>24</sup>.

In general, the results of this study show that health professionals need to develop health education actions with parents of deaf children, in a participatory and socializing environment<sup>25</sup>; and to recognize that the family is the most important *locus* for offering health guidelines, changes in habits and adoption of safe health behaviors. This is critical for reducing morbidity and mortality, as well as for disease prevention, early diagnosis and timely treatment.

### Study limitations

Although the study presents as a limitation the use of the snowball sampling technique, which makes generalizations about the results obtained impossible, it is noteworthy that this is substantial for knowing hidden and difficult-to-access people. In any case, the results can support the development of strategies that provide greater awareness of parents of deaf people about the importance of their communication skills so that children have more access to health information and can adopt safer and more conscious behaviors.

### CONCLUSION

The results of the study showed that the health behaviors of deaf people are influenced by the guidelines they receive from their parents, and that the use of communication in Libras provides greater chances of children being told about the dangers of drug use and alcohol abuse, as well as less likely to feel nervous and stressed.

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