



# Construction and validation of the community health workers perception questionnaire on conditions amenable to physiotherapy in primary health care

*Construção e validação do questionário de percepção dos Agentes Comunitários de Saúde sobre condições sensíveis à fisioterapia na Atenção Primária*

Gabriel Brighenti Menezes Silva 

Samara Maria Neves Barbosa 

Eduardo Augusto Barbosa Figueiredo 

Henrique Silveira Costa 

Alessandra de Carvalho Bastone 

Juliana Nunes Santos 

Universidade Federal dos Vales do Jequitinhonha e Mucuri (UFVJM),  
Diamantina, MG, Brazil

**Date of first submission:** May 15, 2023

**Last received:** September 5, 2023

**Accepted:** October 31, 2023

\*Correspondence: gbrighenti1997@gmail.com

## Abstract

**Introduction:** Community health workers, like the physiotherapist, perform essential functions in primary health care, being an important element in the transformation of public policies. There are no reported studies investigating the knowledge of community health workers about health conditions amenable to physiotherapy intervention in primary health care.

**Objective:** To construct a questionnaire to investigate the perception of community health workers about health conditions that could be remedied by physiotherapy intervention in primary health care. **Methods:** This was a methodological study in which it was initially an analysis matrix with the aim of encompassing the ideas contemplated in the questionnaire. To construct the instrument, a literature review was carried out, and health conditions treatable with physiotherapy in primary health care were chosen. To validate the content and appearance of the items, twelve physiotherapists specialized in primary health care judged the suitability of the items contained. The content validity index was used to determine the degree of agreement during the response analysis process. Subsequently, a semantic analysis was carried out through the understanding of the items by 15 community health workers. In the validation stage, two rounds of evaluation were carried out. Adjustments were made to 17 questions.

**Results:** The study investigated a questionnaire with 20 questions containing hypothetical situations of home visits, in which the resident's situation could or could not constitute a health risk amenable to physiotherapeutic intervention. **Conclusion:** The community health workers perception instrument on health conditions amenable to physiotherapy intervention in primary health care proved to be valid for use in this context. The use of the instrument may contribute to the development of community health worker training programs, with the aim of facilitating team communication.

**Keywords:** Community health workers. Knowledge. Perception. Physiotherapy. Primary health care.

## Resumo

**Introdução:** O Agente Comunitário de Saúde (ACS), assim como o fisioterapeuta, desencadeia funções fundamentais na Atenção Primária à Saúde (APS), sendo elemento importante na transformação de políticas públicas. Inexistem estudos que investiguem o conhecimento dos ACS sobre as condições de saúde sensíveis à intervenção da fisioterapia na APS. **Objetivo:** Construir um questionário de investigação da percepção dos ACS sobre as condições de saúde sensíveis à intervenção da fisioterapia na APS. **Métodos:** Trata-se de um estudo metodológico no qual, inicialmente, construiu-se uma matriz de análise com o intuito de englobar as ideias contempladas no questionário. Para a construção do instrumento, realizou-se uma revisão da literatura, sendo eleitas condições de saúde sensíveis à intervenção da fisioterapia na APS. Para a validação de conteúdo e aparente dos itens, 12 fisioterapeutas especialistas em APS julgaram a adequação dos itens contidos. Utilizou-se o índice de validade de conteúdo para verificar o grau de concordância durante o processo de análise das respostas. Posteriormente, realizou-se análise semântica por meio da compreensão dos itens por 15 ACS. Na etapa de validação, foram realizadas duas rodadas de avaliação. Foram feitos ajustes em 17 questões. **Resultados:** O estudo resultou em um questionário com 20 questões contendo situações hipotéticas de visitas domiciliares, cuja situação do morador poderia ou não configurar um risco à saúde sensível à intervenção fisioterapêutica. **Conclusão:** O instrumento de percepção dos ACS sobre as condições de saúde sensíveis à intervenção da fisioterapia na APS mostrou-se válido para ser utilizado no contexto da APS. A utilização do instrumento poderá contribuir na elaboração de programas de capacitação dos ACS, com o intuito de facilitar a comunicação da equipe.

**Palavras-chave:** Agentes comunitários de saúde. Conhecimento. Percepção. Fisioterapia. Atenção Primária à Saúde.

## Introduction

In 2020, in Brazil, there were around 260 thousand community health workers (CHWs), who contributed to the process of expansion, qualification and consolidation of primary health care (PHC).<sup>1</sup> The CHA is responsible for monitoring families, their registration, guidance and development of health promotion and disease prevention actions. Focusing on educational activities

in health, in homes and communities, it contributes to expanding the population's access to health actions and services, from the perspective of social promotion and protection of citizenship,<sup>2</sup> and is recognized as an important element in the transformation of health policies.<sup>3</sup> Because of the closeness of the CHW with families, they become the main professional capable of assessing the need for care and carrying out the referral appropriately.<sup>4</sup>

According to Law No. 13.595, which regulates the profession to act as an CHW, the professional must have completed secondary education and must attend an initial training course offered by the Unified Health System (SUS) or by the State secretariats, with a minimum workload of 40 hours, attend improvement courses every two years and take the technical course offered by the Ministry of Health.<sup>5</sup> Furthermore, professionals are guaranteed time for training and technical improvement to consider the health needs of the population and problematize them.<sup>5</sup>

The CHW training recommended by the Ministries of Health and Education covers topics related to the policy of health care networks, lines of care in psychosocial care, chronic diseases, maternal, neonatal and infant health and urgency and emergency.<sup>5</sup> However, it is still clear that whether there is a need for greater knowledge about issues related to disability, activity, participation, barriers and facilitators. In a qualitative study, Ribeiro et al.<sup>6</sup> analyzed the possibility of integrating CHW into physiotherapeutic care in PHC. The difficulties encountered in the work of the CHW were addressed, one of which was the lack of knowledge about problems related to disability and the practices suggested by the physiotherapist.<sup>6</sup>

The physiotherapist's responsibilities in PHC are to provide assistance to the user, participating in the promotion, treatment and recovery of their health and in community assistance programs,<sup>7</sup> acting in a specific and integrated way with the team.<sup>8</sup> Effective communication between the physiotherapist and the CHW makes the professional's work viable, as contact with the user at home is a feature that facilitates the relationship between the professional and the user, as it enables the acquisition of more reliable information on everyday life, making the intervention more effective.<sup>7</sup>

Studies were found in the literature investigating CHW knowledge on some topics, such as the care of older individuals,<sup>9</sup> pulmonary tuberculosis,<sup>10</sup> oral health<sup>11</sup>

and speech therapy problems.<sup>12,13</sup> It was also investigated in a non-validated study carried out in Campo Grande, Mato Grosso do Sul,<sup>14</sup> knowledge about the role of physiotherapy in PHC, carried out with closed questions about what the physiotherapist can or cannot do or specific situations in which physiotherapy could be indicated.

In this context, it is important to reflect on the difference between the concepts of knowledge and perception. Knowledge is defined as the act of understanding, comprehending, apprehending something. Perception, on the other hand, is a relationship between a person and an object or event, which cannot be reduced to sensation, as it involves a complex set of events such as cognitive activity and different types of experiences.<sup>15</sup> Therefore, for the agent to understand the health conditions of users in their area of coverage, it is necessary that they have previous experience and knowledge involving the work of physiotherapy.

It is noteworthy that no studies were found with hypothetical questions simulating home visits that investigate the perception of CHWs about health conditions amenable to physiotherapy intervention in PHC. Furthermore, after searching the literature, there appears to be no validated and standardized instruments for this investigation. It is believed, therefore, that the creation of a questionnaire is useful to qualify the CHW's perception of the physiotherapist's role in PHC, enabling the implementation of matrix physiotherapy support for reference teams in PHC. Therefore, the objective of the present study is to construct a questionnaire to investigate the perception of CHA professionals about health conditions amenable to physiotherapy intervention in PHC, as well as to evaluate this perception among these professionals.

## Methods

This is an observational cross-sectional study, approved by the Institutional Ethics Committee of the Federal University of Vales do Jequitinhonha and Mucuri (CAAE protocol 46298821.8.0000.5108), of construction and validation of a questionnaire.

Twelve physiotherapists with at least two years of experience in public health/primary health care participated in the content and apparent validation phase of the questionnaire. For the semantic analysis of the

questionnaire, fifteen CHWs were invited, from different Basic Health Units, who work in the municipalities of Diamantina, Itabirito and Presidente Kubitschek, in the state of Minas Gerais, so that they could reproduce the questions present in the questionnaire.

A structured analysis matrix was constructed, where scientific evidence of the physiotherapist's role in PHC was considered. The matrix gave rise to the variables that were included in the questionnaire. The questionnaire investigated the CHA's perception of health conditions amenable to physiotherapy intervention in PHC in situations of home visits carried out by the CHA in their work routine. The situations were hypothesized by the authors. The questions began with the expression "upon arriving at home", followed by the characteristics of the home environment and the situation of the resident that could constitute a health risk, sensitive or not to physiotherapy intervention in PHC.

The questionnaire consisted of 20 objective questions, including: 14 questions simulating conditions that pose a risk to the user's health, with the problem being able to be resolved in PHC; two questions simulating conditions that pose a risk to the user's health, which are routinely not resolved in PHC; and four questions simulating situations with no risk to the user's health. After reading the wording of the questions, the CHA could choose between the following answer options: a) I do not perceive any risks in the health conditions of the resident(s), as this is a normal situation; b) I perceive risks in the health conditions of the resident(s), which are not routinely resolved in PHC; c) I perceive risks in the health conditions of the resident(s), which can be resolved at PHC, and I will take the case to the team.

For content validation, expert judges (physiotherapists) were invited to participate through an explanatory invitation sent by email. The judges assessed the suitability of the items in light of the attributes of the theoretical construction and the experience of physiotherapists in PHC. The content validity index (CVI) was used to verify the degree of agreement between experts during the response analysis process. The CVI measures the percentage of judges who are in agreement on certain aspects of the instrument. This method uses a Likert scale, with scores from one to four. To assess relevance, responses included the following options: 1 = non-relevant or non-representative item; 2 = item needs major revision to be representative; 3 = item needs minor revision to be representative; 4 = relevant

or representative item. The CVI score was calculated by summing the agreement of the items that were marked "3" or "4" by the experts divided by the total number of responses. Simultaneously with content validation, apparent validity was carried out, which concerns the language, understanding and suitability of the items. Finally, semantic analysis was carried out, which aimed to determine whether all items were understandable for the population for which the instrument was intended. Each item was presented to three groups of five CHWs and they were asked to reproduce the questionnaire questions in other words. The CHA's perception of the sensitive health conditions of the physiotherapist's role in PHC was investigated after approval from the local health department and contact with the managing nurses of each basic health unit (UBS).

The data collected in the questionnaire were analyzed using the Statistical Package for the Social Sciences (SPSS, version 22.0). A descriptive analysis of categorical variables and measures of central tendency and dispersion of numerical variables was carried out. In the validation stage, the agreement index between the judges was calculated. This index made it possible to analyze each item individually and then the instrument as a whole. The decision criterion adopted was an agreement between the judges above 80% (CVI = 0.8).

## Results

Twelve physiotherapists with experience in PHC participated in the content and apparent validation of the questionnaire. Three judges were male and nine were female, with an average length of service in PHC of 12 years, four judges being masters, six doctors and two specialists. Two rounds of evaluation were required. In the first round, 12 judges participated and in the second, six participated.

Table 1 shows the evaluations of the instrument's judges regarding the objectives (purposes, goals and purposes), structure and presentation of the instrument. In the semantic analysis conducted with the CHW, suggestions were made regarding the questionnaire response options and the wording of five questions. In Chart 1, both versions of the questionnaire are presented. On the basis of the suggestions provided by the evaluators, small adjustments were made to 14 questions in the presentation of the content and the suitability of the language, three questions underwent major revisions, and one question was replaced by another involving the topic "respiratory diseases in children", which was suggested by three judges. After the revisions were carried out, the final version was prepared (Chart 2).

**Table 1** - Distribution of content items of validation instrument according to the percentage of agreement of expert judges

Item	NS (%)	LS (%)	PS (%)	S (%)	Assessment
	1	2	3	4	
The instrument covers the proposed topic	0.0	8.3	33.3	58.3	Kept
The questions reflect the concepts involved	0.0	8.3	25.0	66.7	Kept
There is redundancy of items (questions) in the instrument	0.0	8.3	0.0	91.7	Kept
There is coherence between the item (question) and the real situations experienced by the people in primary health care	0.0	8.3	33.3	58.3	Modified
There is coherence between the item (question) and the conditions amenable to physiotherapy intervention in primary health care	0.0	8.3	25.0	66.7	Modified
Necessary information	0.0	8.3	25.0	66.7	Modified

Note: NS = not suitable; LS = little suitable, needs major changes; PS = partially suitable, needs little changes; S = suitable.

**Chart 1** - Pre- and post-validation questionnaires from judges, semantic analysis and content validity index (CVI)

Initial version of questionnaire	Modified version according to judges' suggestions	CVI
Question 1 - Upon arriving at a home, the housewife of the family, sneezing during the conversation, runs out to go to the bathroom to urinate. Upon returning, she reports that this is a frequent situation.	Question 1 - Upon arriving at a home for a routine visit, after a while of conversation, the resident begins to cough and, embarrassed, tells that she lost urine, this being a common situation.	0.83
Question 2 - Upon arriving at a home, you find an 85-year-old couple, who lives alone and carries out all household activities. The man reports that his wife suffered a fall the day before and that since then she has been unable to walk because she has a lot of pain in her hip area	Question 2 - Upon arriving at a home, you find an 85-year-old user who suffered a fall the day before and has since been unable to walk because he has a lot of pain in the hip area.	0.91
Question 3 - Upon arriving at a home, you notice that while you are talking about the family's health care, the 3-year-old child who was on your lap, when placed on the floor, crawls to pick up a toy.	Question 3 - Upon arriving at a home, you notice that while you are talking about the family's health care, the 2-year-old child who was on your lap, when placed on the floor, is unable to stand up on his own and crawls to get a toy.	0.91
Question 4 - Upon arriving at a home, you find the user who has a lower limb amputation (above the knee), reporting that the orthosis is hurting the stump.	Question 4 - Upon arriving at a home, you find the user who has an above-knee amputation, reporting that the prosthesis is small and hurting him.	0.91
Question 5 - Upon arriving at a home to which you were requested, the individual, who had a stroke 2 years ago, complains of pain in the shoulder region, also reporting difficulties in activities such as eating and getting things from the shelf.	Question 5 - Upon arriving at a home to which you were requested, the user had a stroke 2 years ago and is complaining of pain in the shoulder region, also reporting difficulties in activities such as eating and getting things from the shelf.	1.0
Question 6 - Upon arriving at a home, you find a 45-year-old man, an ex-smoker (he smoked for 20 years), complaining of shortness of breath and tiredness when walking and climbing stairs.	Question 6 - Upon arriving at a home, you find a 45-year-old user who smoked for almost 20 years, has a very deep voice, and lately reports having a lot of difficulty climbing stairs and walking, with shortness of breath and tiredness.	1.0
Question 7 - Upon arriving at a home for a routine home visit, you notice that a family member is lying down and has not gone to work reporting that he has a hangover.	Question 7 - Upon arriving at a home for a routine home visit, you notice that an 18-year-old user is lying down and has not gone to work reporting that he has a hangover after going to a party with friends.	0.83
Question 8 - When arriving at a home to check whether the 34-week pregnant woman is carrying out prenatal care correctly, she says that she has trouble sleeping and has heartburn but carries out all routine activities without difficulty.	Question 8 - Upon arriving at a home to check whether a 34-week pregnant woman is carrying out prenatal care correctly, she says that she has trouble sleeping and has heartburn but carries out all routine activities without difficulty.	1.0
Question 9 - When arriving at a home, you notice that the father of the family is unable to carry a small potted plant to remove stagnant water from the container, he needs to take several breaks and always rests his hand on the spine.	Question 9 - Upon arriving at a home, you notice that the user is unable to carry a small potted plant to remove stagnant water from the container, needs several breaks and complains of recurring back pain.	1.0
Question 10 - Upon arriving at a home, you notice the presence of varicose veins (enlarged vessels) on Mrs. Maria's leg, and when questioned, she reports feeling pain in her lower limbs.	Question 10 - Upon arriving at a home, you notice the presence of varicose veins (enlarged vessels) in the older user's legs, and she reports feeling pain in her legs, especially when she is standing still.	1.0
Question 11 - Upon arriving at a home to reschedule an appointment, the pregnant woman in her last trimester of pregnancy reports a headache and had swelling in her legs and arms, having difficulty with her activities.	Question 11 - Upon arriving at a home for a routine visit, the pregnant woman in her last trimester reports low back pain and swelling in her legs and arms, in addition to many concerns about childbirth and postpartum.	0.91
Question 12 - Upon arriving at a home to visit Mr. José, a young adult, after a hospital stay for a hypertensive crisis, he is stable, communicative and looks good.	Question 12 - Upon arriving at a home to visit a user approximately 35 years old, after a brief hospital stay as a result of an accident at work, the user is in a good mood, communicative and carrying out their activities normally.	0.83
Question 13 - Upon arriving at a home, the daughter reports that her 58-year-old mother suffered two little falls at home in the last month and has been complaining of dizziness whenever she turns her head.	Question 13 - Upon arriving at a home, the user reports that her 58-year-old mother suffered two little falls at home in the last month and has been complaining of dizziness whenever she turns her head.	0.91
Question 14 - Upon arriving at a home, you notice that the housewife is discouraged, complaining of pain in the neck, elbows, spine, hips and knees, which is quickly relieved with medication, but always returns.	Question 14 - Upon arriving at a home, you notice that the user is discouraged and complains of pain in the neck, elbows, spine, hips and knees, which is quickly relieved with medication, but the pain always returns.	0.91

**Chart 1** - Pre- and post-validation questionnaires from judges, semantic analysis and content validity index (CVI) (continued)

Initial version of questionnaire	Modified version according to judges' suggestions	CVI
Question 15 - Upon arriving at a home, the mother of the family complains that her 14-year-old son has not been helping around the house for 1 month, and when questioned, he says that he is busy with schoolwork.	Question 15 - Upon arriving at a home, the user complains that her teenage son, in the last month, no longer wants to help with the housework. He always makes an excuse, saying that he has to study or that he is tired.	0.83
Question 16 - Upon arriving at a home, you find the housewife complaining of back pain and she reports that she is becoming "hunchbacked" and having difficulty doing household tasks. She also says she has the feeling that she has "gotten smaller".	Question 16 - Upon arriving at a home, you find the user complaining of back pain, and she reports that she is becoming "hunchbacked" and having difficulty doing household tasks. She also says she has the feeling that she has "gotten smaller".	0.91
Question 17 - Upon arriving at a home, you find Mrs. Lúcia, who takes care of her bedridden mother-in-law, sleeping on the sofa. Lúcia tells you that she is feeling very tired and feels pain in her arm and back when she takes her mother-in-law to the bathroom.	Question 17 - Upon arriving at a home, you find the user, who takes care of her bedridden mother-in-law, sleeping on the sofa. She reports that she is feeling very tired and feels pain in her arm and back when she takes her mother-in-law to the bathroom.	1.0
Question 18 - Upon arriving at a home, you notice that the older man remains uninterested and responds with few words to what is asked, needs support to stand and walks with very short steps. When questioning her daughter, she says she noticed that her father was hunched over, stiff and slow in performing basic activities, in addition to having small tremors.	Question 18 - Upon arriving at a home, you notice that the 70-year-old user remains uninterested and responds with few words to what is asked, needs support to stand and walks with very short steps. When questioning her daughter, she says she noticed that her father' was hunched over, stiff and slow in performing routine activities, in addition to having small tremors in his hands.	1.0
Question 19 - Upon arriving at a home, you find Mr. José recently tracheostomized, breathing badly, and when you question his wife, she says that he has had a fever for 2 days. When you get close to Mr. José, you notice that there is secretion in the tracheostomy and that it is a little yellowish.	Question 19 - Upon arriving at a home, the user tells you that her 4-year-old daughter has a constant cough and is having difficulty breathing, especially after playing "tag".	0.91
Question 20 - Upon arriving at a home for a routine visit, the lady comes to help you, and while talking with her, you notice that a burning smell is coming from the kitchen. The lady goes to turn off the heat, and her son says that his mother has forgotten about it, frequent with things and that she puts salt in her coffee instead of sugar.	Question 20 - Upon arriving at a home for a routine visit, the user comes to help you, and while talking with her, you notice a burning smell coming from the kitchen. The lady goes to turn off the heat, and her son says that his mother has often forgotten things and that she puts salt in her coffee instead of sugar.	1.0

**Chart 2** - Final version of the questionnaire investigating the knowledge and perception of community health workers (CHWs) about health conditions amenable to physiotherapy intervention in primary health care (PHC)

Hypothetical situation presented to CHWs	Responses to questions		
	A	B	C
Upon arriving at a home...	I do not perceive any risks to the health conditions of the resident(s), as this is a normal situation	I perceive risks in the health conditions of the resident(s) that are not routinely resolved in PHC	I perceive risks in the health conditions of the resident(s) that can be resolved at PHC, and I will take the case to the team
Question 1 - Upon arriving at a home for a routine visit, after a while of conversation, the resident begins to cough and, embarrassed, tells that she has lost urine, this being a common situation.			
Question 2 - Upon arriving at a home, you find an older resident, 85 years old, who suffered a fall the day before and who has since been unable to walk because he has a lot of pain in the hip area.			
Question 3 - Upon arriving at a home, you notice that while you are talking about the family's health care, the 2-year-old child who was on your lap, when placed on the floor, is unable to stand up on his own and crawls to get a toy.			

**Chart 2** - Final version of the questionnaire investigating the knowledge and perception of community health workers (CHWs) about health conditions amenable to physiotherapy intervention in primary health care (continued)

Hypothetical situation presented to CHWs	Responses to questions		
	A	B	C
Question 4 - Upon arriving at a home, you find the user who has an above-knee amputee reporting that the prosthesis is small and hurting him.			
Question 5 - Upon arriving at a home for a visit, a user who had a stroke 2 years ago is complaining of pain in the shoulder region and also reports difficulties in activities such as eating and getting things from the shelf.			
Question 6 - Upon arriving at a home, you find a 45-year-old user who smoked for almost 20 years, has a very deep voice, and lately reports having a lot of difficulty climbing stairs and walking, with shortness of breath and tiredness.			
Question 7 - Upon arriving at a home for a routine home visit, you notice that an 18-year-old user is lying down and has not been to school, reporting that he has a hangover after going to a party with friends, this being a situation not commonplace.			
Question 8 - Upon arriving at a home to check whether an 8-month pregnant woman is carrying out prenatal care correctly, she says that she is uncomfortable sleeping, but carries out all routine activities without difficulty.			
Question 9 - Upon arriving at a home, you notice that an adult user is unable to carry a potted plant to remove stagnant water from the container, needs several breaks and complains of recurring back pain.			
Question 10 - Upon arriving at a home, you notice the presence of varicose veins (enlarged vessels) in the legs of the 65-year-old user, and she reports feeling pain in her legs, especially when she is standing still.			
Question 11 - Upon arriving at a home for a routine visit, the pregnant woman in her last trimester reports low back pain and swelling in her legs and arms, in addition to many concerns about childbirth and postpartum.			
Question 12 - Upon arriving at a home to visit a 35-year-old user, after a brief hospital stay as a result of an accident at work, he is in a good mood, communicative and carrying out his activities normally.			
Question 13 - Upon arriving at a home, the user reports that her 58-year-old mother suffered two little falls at home in the last month and has been complaining of dizziness whenever she turns her head.			
Question 14 - Upon arriving at a home, you notice that the user is discouraged and complains of pain in the neck, elbows, spine, hips and knees, which is quickly relieved with medication, but the pain always returns.			
Question 15 - Upon arriving at a home, the user complains that her teenage son, in the last month, no longer wants to help with the housework. He always makes an excuse, saying that he has to study or is tired.			
Question 16 - Upon arriving at a home, you find a 70-year-old user complaining of back pain, and she reports that she is becoming "hunchbacked" and having difficulty doing household tasks. She also says she has the feeling that she has "gotten smaller".			

**Chart 2** - Final version of the questionnaire investigating the knowledge and perception of community health workers (CHWs) about health conditions amenable to physiotherapy intervention in primary health care (continued)

Hypothetical situation presented to CHWs	Responses to questions		
	A	B	C
Question 17 - Upon arriving at a home, you find the user, who takes care of her bedridden mother-in-law, sleeping on the sofa. She reports that she is feeling very tired and feels pain in her arm and back when she takes her mother-in-law to the bathroom.			
Question 18 - Upon arriving at a home, you notice that a 70-year-old user remains uninterested and responds with few words to what is asked, needs support to stand and walks with very short steps. When questioning her daughter, she says she noticed that her father was hunched over, stiff and slow performing routine activities, in addition to having small tremors in his hands.			
Question 19 - Upon arriving at a home, the user tells you that her 4-year-old daughter has a constant cough and is having difficulty breathing, especially after playing "tag".			
Question 20 - Upon arriving at a home for a routine visit, the user comes to assist you, and while you two are talking, you notice a burning smell coming from the kitchen. The lady goes to turn off the heat, and her son says that his mother has often forgotten things and that she puts salt in her coffee instead of sugar.			

## Discussion

The present study presented a proposal to investigate the perception of the CHA, based on home visits, which constitute integration actions between the health professional and the local population in PHC.<sup>16</sup> However, such an investigation should be preceded by the creation and validation of an instrument to measure this "perception of CHWs" in their work routines, as no questionnaires with this purpose were found in the literature.<sup>17</sup> Therefore, previous studies have sought to identify the health conditions that are prevalent and amenable to physiotherapy intervention in PHC.<sup>18,19</sup> Subsequently, questions were hypothesized based on the reference found and, finally, it was assessed whether each question in the instrument was relevant and representative.

In the instrument validation stage, experienced judges in PHC made adjustments to the language and content,<sup>17</sup> as well as proposing replacements of entire questions and the insertion of a question with the topic "respiratory diseases in children", an important cause of illness in children up to five years of age and responsible for high morbidity and mortality in childhood, particularly in developing countries.<sup>20</sup>

During the semantic assessment, it was possible to notice that some changes related to language were necessary for the understanding of the CHW. The instrument met the minimum prerequisites for structuring, as all items were understandable to the CHWs who participated in this phase of the study. The CHW sample contained a heterogeneous level of education (high school, technical secondary and postgraduate) for accuracy, with three groups of five professionals in three different municipalities.<sup>21</sup> In addition to evaluating the understanding of the wording of the questions, the CHW considered the answer options and suggested the inclusion of the word "routinely" in answer option B of the instrument, which was accepted by the researchers, since the answer options in the questionnaire are linked to their attitudinal skills in their work routine.<sup>22</sup>

In PHC, the preferred gateway to the SUS health care network, physiotherapists have sought new meanings in their practices, considering users in their biopsychosocial model to promote comprehensive care with a focus on human functionality. Although physiotherapeutic work in PHC is well described in the literature,<sup>23-31</sup> a challenge in this class is raising awareness about the importance



of professionals on the PHC health team, through the identification of physiotherapeutic care needs. To achieve this, it is necessary for other professionals working in PHC to obtain knowledge about physiotherapeutic activities, so that user care can be provided. Accordingly, after the creation and validation of the instrument, we sought to investigate the perception and knowledge of CHWs about conditions amenable to physiotherapy intervention in PHC, which was done in phase two of the present study.

The importance of the presence of the physiotherapist in PHC has been widely discussed in the literature,<sup>7,18,19</sup> but the team needs to have knowledge about the potential of physiotherapy so that user care can be addressed in a more fruitful way, contributing to the reach of comprehensive care, a doctrinal principle of the SUS. With this, the study created an important instrument for evaluating the perception of CHWs about the sensitive conditions of physiotherapy in PHC, so that it can be applied throughout the country.

## Conclusion

The CHW perception instrument on health conditions amenable to physiotherapy intervention in PHC is valid for use with CHWs in the PHC context. The use of the instrument may contribute to the development of training programs for CHWs, with the aim of facilitating team communication and improving the effectiveness of physiotherapists in PHC.

## Authors' contributions

All authors were responsible for the conception and design of the study, and the acquisition, analysis and interpretation of the data. GBMS and JSN prepared the article and critically reviewed it for relevant intellectual content. All authors approved of the final version.

## References

1. Ministério da Saúde. Secretaria de Atenção Primária à Saúde. Painéis de indicadores da APS - Versão 1.0. 2023 [cited 2023 Sep 3]. Available from: <https://sisaps.saude.gov.br/painelsaps>
2. Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Política Nacional de Atenção Básica. Brasília: Ministério da Saúde; 2012. [Full text link](#)
3. Lotta GS. Saberes locais, mediação e cidadania: o caso dos agentes comunitários de saúde. *Saude Soc.* 2012;21(Supl 1): 210-22. [DOI](#)
4. Broch D, Ramos DT, Riquinho DL, Silveira MR, Santos VCF. The knowledge network of community health agents. *Rev Pesqui.* 2021;12:46-53. [DOI](#)
5. Brasil. Lei nº 13.595, de 5 de janeiro de 2018. Altera a Lei Nº 11.350, de 5 de outubro de 2006. Brasília: Diário Oficial da União; 8 jan 2018. [Full text link](#)
6. Ribeiro KSQS, Araújo Neto MJ, Arangio MG, Nascimento PBS, Martins TNT. A participação de agentes comunitários de saúde na atuação da fisioterapia na atenção básica. *Rev Aten Primaria Saude.* 2007;10(2):156-68.
7. Loures LF, Silva MCS. A interface entre o trabalho do agente comunitário de saúde e do fisioterapeuta na atenção básica à saúde. *Cienc Saude Coletiva.* 2010;15(4):2155-64. [DOI](#)
8. Campos GWS, Domitti AC. Apoio matricial e equipe de referência: uma metodologia para gestão do trabalho interdisciplinar em saúde. *Cad Saude Publica.* 2007;23(2):399-407. [DOI](#)
9. Paiva KM, Hillesheim D, Haas P. Atenção ao idoso: percepções e práticas dos Agentes Comunitários de Saúde em uma capital do sul do Brasil. *CoDAS.* 2019;31(1):e20180069. [DOI](#)
10. Gaspar LMS, Braga C, Albuquerque GDM, Silva MPN, Maruza M, Montarroyos UR, et al. Conhecimento, atitudes e práticas de agentes comunitários de saúde sobre tuberculose pulmonar em uma capital do Nordeste do Brasil. *Cienc Saude Coletiva.* 2019;24(10):3815-24. [DOI](#)
11. Silva EBA, Zanin L, Oliveira AMG, Flório FM. Agentes comunitários de saúde: conhecimentos em saúde bucal e fatores associados. *Cad Saude Colet.* 2021;29(2):226-37. [DOI](#)
12. Santos JN, Rodrigues ALV, Silva AFG, Matos EF, Jerônimo NS, Teixeira LC. Percepção de agentes comunitários de saúde sobre os riscos à saúde fonoaudiológica. *Rev Soc Bras Fonoaudiol.* 2012;17(3):333-9. [DOI](#)

13. Knochenhauer CCLS, Vianna KMP. Percepção dos Agentes Comunitários de Saúde quanto aos agravos fonoaudiológicos. *CoDAS*. 2016;28(6):697-703. [DOI](#)
14. Batiston AP, Silva JS, Silva EC, Bonilha LAS, Ferrari FP, Fernandes JM, et al. Atuação do fisioterapeuta na Atenção Primária à Saúde: o que sabem os Agentes Comunitários de Saúde. *Cad Edu Saude e Fis*. 2019;6(12)71-82. [DOI](#)
15. Smith PJ. A percepção como uma relação: uma análise do conceito comum de percepção. *Analytica*. 2014;18(1)109-32. [Full text link](#)
16. Alonso CMC, Béguin PD, Duarte FJCM. Trabalho dos agentes comunitários de saúde na Estratégia Saúde da Família: metassíntese. *Rev Saude Publica*. 2018;52:14. [DOI](#)
17. Alexandre NMC, Coluci MZO. Validade de conteúdo nos processos de construção e adaptação de instrumentos de medidas. *Cienc Saude Coletiva*. 2011;16(7)3061-8. [DOI](#)
18. Portes LH, Caldas MAJ, Paula LT, Freitas MS. Atuação do fisioterapeuta na Atenção Básica à Saúde: uma revisão da literatura brasileira. *Rev APS*. 2011;14(1)111-9. [Full text link](#)
19. Bornhöft L, Larsson ME, Nordeman L, Eggertsen R, Thorn J. Health effects of direct triaging to physiotherapists in primary care for patients with musculoskeletal disorders: a pragmatic randomized controlled trial. *Ther Adv Musculoskelet Dis*. 2019;11:1759720X19827504. [DOI](#)
20. David MLO, Ribeiro MAGO, Zanolli ML, Mendes RT, Assumpção MS, Schivinski CIS. Proposta de atuação da fisioterapia na saúde da criança e do adolescente: uma necessidade na atenção básica. *Saude Debate*. 2013;37(96):120-9. [Full text link](#)
21. Pasquali L. Princípios de elaboração de escalas psicológicas. *Rev Psiquiatr Clin*. 1998;25(5):206-13. [Full text link](#)
22. Brasil. Ministério da Saúde. A Implantação da Unidade de Saúde da Família/Milton Menezes da Costa Neto, org. Brasília: Ministério da Saúde; 2000. [Full text link](#)
23. Ribeiro CD, Flores-Soares MC. Desafios para a inserção do fisioterapeuta na atenção básica: o olhar dos gestores. *Rev Salud Publica*. 2015;17(3):379-93. [DOI](#)
24. Eliezer ICA, Ferraz SBS, Silva AO. Atribuições do fisioterapeuta na atenção primária à saúde. *Nucl Conhecimento*. 2021;6(12):105-27. [Full text link](#)
25. Aguirrezabal I, San Román MSP, Cobos-Campos R, Orruño E, Goicoechea A, Eranueva RM, et al. Effectiveness of a primary care-based group educational intervention in the management of patients with migraine: a randomized controlled trial. *Prim Health Care Res Dev*. 2019;20:e155. [DOI](#)
26. Lopes AL, Lemos SMA, Chagas CA, Araújo SG, Santo JN. Evidências científicas da reabilitação vestibular na atenção primária à saúde: uma revisão sistemática. *Audiol Commun Res*. 2018;23:e2032. [DOI](#)
27. Oliveira CB, Maher CG, Pinto RZ, Traeger AC, Lin CC, Chenot JF, et al. Clinical practice guidelines for the management of non-specific low back pain in primary care: an updated overview. *Eur Spine J*. 2018;27(11):2791-803. [DOI](#)
28. Jaffar A, Mohd-Sidik S, Nien FC, Fu GQ, Talib NH. Urinary incontinence and its association with pelvic floor muscle exercise among pregnant women attending a primary care clinic in Selangor, Malaysia. *PLoS One*. 2020;15(7):e0236140. [DOI](#)
29. Sá MRC, Thomazinho PA, Santos FL, Cavalcanti NC, Ribeiro CTM, Negreiros MFV, et al. Assistência fisioterapêutica na atenção primária à saúde infantil: uma revisão das experiências. *Rev Panam Salud Publica*. 2014;36(5):324-30. [Full text link](#)
30. Faria CDCM, Araujo DC, Carvalho-Pinto BPB. Assistance provided by physical therapists from primary health care to patients after stroke. *Fisioter Mov*. 2017;30(3):527-36. [DOI](#)
31. Jolly K, Sidhu MS, Hewitt CA, Coventry PA, Daley A, Jordan R, et al. Self management of patients with mild COPD in primary care: randomised controlled trial. *BMJ*. 2018;361:k2241. [DOI](#)