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Home self-management and regional physiotherapeutic practices: an overview from a reference center for individuals with cystic fibrosis

Automanejo domiciliar e regional de práticas fisioterapêuticas: panorama de um centro de referência para indivíduos com fibrose cística

Mariana Ventura Goulart[1]; Thaise Helena Cadorin[1]; Camila Isabel Santos Schivinski[1,2]*

[1]Universidade do Estado de Santa Catarina (UDESC), Florianópolis, SC, Brasil
[2]Universidade Estadual de Campinas (UNICAMP), Campinas, São Paulo, Brasil

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***Corresponding author:** Camila Isabel Santos Schivinski. E-mail: cacaiss@yahoo.com.br

Abstract

Background: Respiratory physiotherapy interventions are essential for individuals with cystic fibrosis (CF), and care should be personalized. **Aim:** To describe the physiotherapy techniques and resources used in home and regional self-management for children and adolescents with CF, monitored at a reference center. **Methods:** Cross-sectional study, including children and adolescents aged 1 to 15 years and their caregivers, divided into three groups: GA (1–5 years), GB (6–10 years), and GC (11–15 years). Data on genotype, pathogen colonization, and disease severity were collected from medical records. After anthropometric assessment, participants were interviewed regarding clinical characteristics and respiratory physiotherapy practices performed at home and in physiotherapy services in their cities. Data was tabulated in Microsoft Excel and presented descriptively and by frequencies. **Results:** A total of 55 individuals participated, with a mean age of 6.90 ± 4.73 years; 34.54% had the homozygous ΔF508 genetic mutation, and 69.09% had excellent disease severity. OF the total sample, 85.71% have been undergoing respiratory physiotherapy since diagnosis. Techniques varied by age group and care setting: home vs. professional: GA: chest percussion (17.24% vs. 41.38%), chest compression-vibration (13.79% vs. 41.38%). GB: Shaker® (38.46% vs. 38.46%), Respiron® (30.77% vs. 23.08%), bottle blowing (15.38% vs. 30.77%). GC: Shaker® (61.54% vs. 53.85%), Respiron® (30.77% vs. 53.85%). **Conclusion:** Respiratory physiotherapy interventions are part of the daily routine of children and adolescents with CF and are recognized by them and their caregivers as essential for maintaining health. Conventional techniques are predominantly used in younger children, while instrumental techniques are more common in adolescents.

Keywords: Physical Therapy Modalities; Respiratory Tract Diseases; Pediatrics.

Resumo

Introdução: as intervenções de fisioterapia respiratória são fundamentais para indivíduos com fibrose cística (FC) e o acompanhamento deve ser feito de maneira personalizada. **Objetivo:** descrever as técnicas e os recursos fisioterapêuticos utilizados no autogerenciamento domiciliar e regional em crianças e adolescentes com FC, acompanhados em um centro de referência. **Métodos:** estudo transversal, incluídas crianças e adolescentes de 1 a 15 anos de idade e seus responsáveis, subdivididos em 3 grupos: GA: 1-5 anos, GB: 6-10 anos, GC: 11-15 anos. Coletou-se em prontuário médico os dados de genótipo, colonização por patógenos e gravidade da doença. Após avaliação antropométrica, os participantes foram entrevistados quanto à clínica e as práticas de fisioterapia respiratória realizadas em domicílio e em serviços de fisioterapia onde residem. Os dados foram tabulados no *Microsoft Excel* e apresentados de forma descritiva e por frequências. **Resultados:** participaram 55 indivíduos, média de idade de 6,90±4,73 anos, 34,54% com mutação genética ΔF508 homozigoto e 69,09% com gravidade excelente. Da amostra total, 85,71% realizam fisioterapia respiratória desde o diagnóstico. As técnicas empregadas variam conforme a faixa etária e a assistência: domicílio x profissional: GA: tapotagem (17,24% x 41,38%), vibrocompressão (13,79% x 41,38%). GB: Shaker® (38,46% x 38,46%), Respiron® (30,77% x 23,08%), PEP subaquática (15,38% x 30,77%). GC: Shaker® (61,54% x 53,85%), Respiron® (30,77% x 53,85%). **Conclusão:** as intervenções de fisioterapia respiratória integram a rotina de crianças e adolescentes com FC, sendo reconhecida por eles e seus responsáveis como fundamental para a manutenção da saúde. As técnicas convencionais são mais utilizadas nas crianças, enquanto nos adolescentes são os recursos instrumentais.

Palavras-chave: Fisioterapia; Doenças respiratórias; Pediatria.

INTRODUCTION

Cystic fibrosis (CF) is a chronic, progressive, and multisystemic health condition whose typical clinical manifestations include cough, chronic diarrhea, and malnutrition[1]. In this situation, individuals require the assistance of a multidisciplinary team at referral centers for the disease to receive prophylactic therapy aimed at controlling symptoms, improving quality of life, and providing longevity[1,2]. The respiratory system is among the most affected systemic affections, characterized by chronic obstruction of airflow. This can result from the accumulation of secretions in the airways, with recurrent infectious and inflammatory processes, which can cause lung injury and bronchiectasis[1,3].

In this context, the main objectives of the respiratory physiotherapy interventions are bronchial clearance, improvement of cardiorespiratory fitness, and inclusion of physical exercises in the routine of individuals affected by CF. Urinary incontinence, pregnancy, musculoskeletal changes, and complications caused by the progression of this health condition[4,5] are also part of physiotherapy management. There is clinical evidence that physiotherapy care should begin upon diagnosis, even in asymptomatic children, since individualized monitoring by this professional contributes to clinical improvement in this population, consequently impacting on quality of life[2,6,7].

The physiotherapeutic procedures are individualized and must respect the symptoms and age of each individual, having a better motivation and adherence to treatment, especially during the transition period from childhood to adolescence[1,6]. Different techniques and resources may be indicated for individuals, with no superiority between techniques so far, according to the literature[8].

It is also necessary to guide individuals with CF and family members on how to manage care, showing that the practice favors positive health outcomes[9,10]. Only a few studies in the literature address the topic of self-management, especially in individuals with CF. A systematic review[11] included four studies related to self-management showing that education in self-management can improve the knowledge of individuals with CF, but not of parents and/or caregivers, and it can also result in positive changes in certain behaviors. However, these changes are not maintained over time, requiring reinforcement sessions with guidance. Even so, the quality of evidence on this topic is still limited[11]. Therefore, to strengthen the patient's skills and self-confidence, health professionals are encouraged to act in support of self-management through collaboration strategies between the patient and the health team, so that the individual can receive close monitoring[12].

Given the above, this study aimed primarily to describe the physiotherapy techniques and resources used in home and regional self-management by other physiotherapy services in children and adolescents with CF, followed at a referral center in the state of Santa Catarina, Brazil. Secondary objectives included identifying the importance of physiotherapy interventions in the perception of individuals and their guardians, as well as recording complaints related to the health condition and the presence or absence of signs and symptoms.

METHODS

This is an observational study involving children and adolescents with CF and their guardians, regularly monitored at the CF outpatient clinic of the Joana de Gusmão Children's Hospital (Hospital Infantil Joana de Gusmão - HIJG) in Florianópolis, Santa Catarina, Brazil. Individuals with a diagnosis of CF confirmed by sweat test, aged 1 to 15 years, and residing in Santa Catarina were included. Individuals with cognitive and neurological deficits were excluded due to their inability to answer the questions.

Before data collection, all participants were guided on the research and, upon agreeing to participate, they signed the ethical terms. The research was authorized by the Human Research Ethics Committee (Comitê de Ética em Pesquisa - CEP) under number 80800217.4.0000.5361. The interview was conducted by a physiotherapist on a single day during outpatient consultations at the hospital, from March to November 2019. The answers were obtained mainly from the guardian to understand which techniques were most commonly used with children in the home environment and in other services they attended. The child and adolescent participated in the study to add information and confirm some information.

Initially, data regarding anamnesis were collected. Then, participants were asked about the physiotherapeutic resources, techniques, and devices used by the family during home or outpatient respiratory physiotherapy through an assessment form created for data collection. Individuals were also asked whether they used therapeutic toys or other blowing devices, such as bottle blowing, soap bubbles, balloon inflation, or digital games as resources associated with physiotherapeutic practice, applicable according to the age group.

At the same time, an anthropometric assessment was conducted using a portable Sanny® stadiometer to check height, with data recorded in centimeters (cm). Mass was also assessed using a Wiso® Ultra Slim W903 digital glass scale, with data recorded in kilograms (kg). Body mass index (BMI) was calculated using the *Telessaúde Brasil* Program of the Ministry of Health (2012)[13].

Information concerning the genotype and severity of the disease was gathered from medical records. The genotype was categorized into three classifications: ΔF508 heterozygous, ΔF508 homozygous, and other mutations. The severity of the disease was assessed based on the most recent *Schwachman-Doerschuk* Score, systematically recorded by the medical team at HIJG. Individuals are classified as having a severe condition if they receive a score of less than 40, moderate if the score falls between

40 and 55, mild between 56 and 70, good between 71 and 85, and excellent for scores ranging from 86 to 100[14].

To present the data, participants were categorized into three age groups: Group A (1-5 years), Group B (6-10 years), and Group C (11-15 years). The data collected were processed using a Microsoft Excel spreadsheet, where descriptive statistics were employed. This included the calculation of absolute and relative frequencies for categorical variables, as well as the mean and standard deviation for quantitative variables.

RESULTS

In 2019, out of 100 individuals monitored at HIJG, 55 consented to participate in the current study. The sample predominantly consisted of boys (56.36%), with a mean age of 6.90 ± 4.73 years. In terms of genetic mutations, homozygous ΔF508 was the most common, accounting for 34.54% of the participants. Additionally, the majority (69.09%) were classified by the SDS as having excellent disease severity and did not exhibit infection by pathogens (60.71%). Among those who were infected, *Staphylococcus aureus* was the most frequently encountered pathogen, affecting 35.71% of participants. Details on the sample characteristics are provided in Table 1.

Table 1. Sample characterization.

Variables	Sample
Age (Years old)	6.90±4.73
Gender N (%)	
M	31 (56.36)
F	24 (43.64)
BMI (kg/m²) N (%)	15.40±3.37
Underweight	6 (10.91)
Eutrophic	43 (78.18)
Overweight	5 (9.09)
Obesity	1 (1.82)
Genotype N (%)	
ΔF508 heterozygous	18 (32.73)
ΔF508 homozygous	19 (34.54)
Other mutations	18 (32.73)
Infection by pathogens N (%)	
Staphylococcus aureos	20 (35.71)
Pseudomonas aeruginosa	7 (12.50)
Burkholderia cepacia	2 (3.57)
Uncolonized	34 (60.71)
SDS classification N (%)	
Excellent	38 (69.09)
Good	12 (21.82)
Mild	5 (9.09)

Legend: Data are presented as mean±standard deviation and percentage (). BMI: body mass index; F: female; Kg/m²: kilogram per square meter; N: number of individuals; M: male; SDS: Schwachman-Doerschuk score; %: percentage.

In terms of physiotherapy care, 85.71% of participants began follow-up treatment shortly after being diagnosed with CF, with the average age of diagnosis being just 2 months, as reported by family members. During interviews, 83.93% indicated they were engaged in respiratory physiotherapy practices and receiving care through the public health system, attending between one to five appointments weekly, with one or two appointments per week being the most prevalent. Additionally, when asked about the availability of specialized physiotherapy services in their city, an impressive 96.43% confirmed that such services were accessible to them. Among the total respondents, 16.07% did not participate in physiotherapy, citing reasons such as transportation issues, family logistical challenges, and waiting lists for physiotherapy services in their area. Most participants with CF reported having undergone physiotherapy at some point in their lives, except for one adolescent who had never accessed this care.

Manual techniques were the most cited among the physiotherapy resources and techniques used in the routine of individuals with CF (73.21%), 17.85% reported that they did not use manual techniques, and 8.94% did not respond. Table 2 presents the manual techniques, instrumental resources, and blowing toys used during respiratory physiotherapy, according to the age group of the individuals, both at home and in the physiotherapy office. Furthermore, 46.67% of the individuals underwent physiotherapy every day of the week, 23.34% reported that they did it for five days, alternating between care with the physiotherapist and at home with professional guidance. The majority (60.38%) of the participants received guidance from the physiotherapist to perform respiratory physiotherapy techniques and resources at home daily, independently.

In the home environment, after physiotherapy guidance, the techniques were performed under the supervision of those responsible for the individuals, mostly their parents. The most commonly used techniques at home were chest percussion (17.24%), chest compression-vibration (13.79%) and compression-decompression (10.34%) in younger children, followed by Shaker® and Respiron® in older children (38.46% and 30.77%, respectively) and in adolescents (61.54% and 30.77%, respectively). In the assistance provided by professionals from each region, the procedures were generally performed by generalist physiotherapists due to the shortage of specialists in most of the regions. The main procedures applied varied according to age group, with manual techniques such as

Table 2. Manual techniques, instrumental resources and blow toys used during respiratory physiotherapy, according to the age group of the individuals.

Resources and techniques performed	Group A (N= 29)		Group B (N= 13)		Group C (N= 13)	
Average age (years old)	3.03±4.31		7.92±1.49		14.15±4.67	
Gender (n, %)						
F	18 (62.07)		4 (38.46)		3 (23.08)	
M	11 (37.93)		9 (69.23)		10 (76.92)	
	H	**FT**	**H**	**FT**	**H**	**FT**
Manual techniques (n, %)						
Chest percussion	5 (17.24)	12 (41.38)	1 (7.69)	4 (30.77)	0 (0)	1 (7.69)
Chest compression-vibration	4 (13.79)	12 (41.38)	0 (0)	2 (15.38)	0 (0)	0 (0)
Compression/decompression	3 (10.34)	8 (27.59)	0 (0)	0 (0)	0 (0)	1 (7.69)
Rhythmic thoracic sway	1 (3.45)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Huffing	0 (0)	2 (6.90)	1 (7.69)	2 (15.38)	0 (0)	2 (15.38)
IEF	2 (6.90)	5 (17.24)	1 (7.69)	1 (7.69)	0 (0)	1 (7.69)
AAD	1 (3.45)	0 (0)	0 (0)	1 (7.69)	0 (0)	0 (0)
Instrumental resources (n, %)						
Shaker®	1 (3.45)	1 (3.45)	5 (38.46)	5 (38.46)	8 (61.54)	7 (53.85)
Cornet®	0 (0)	0 (0)	1 (7.69)	1 (7.69)	0 (0)	0 (0)
Respiron®	0 (0)	3 (10.34)	4 (30.77)	3 (23.08)	4 (30.77)	7 (53.85)
Mechanical vibration	2 (6.90)	2 (6.90)	1 (7.69)	1 (7.69)	0 (0)	0 (0)
EPAP Mask	0 (0)	0 (0)	0 (0)	0 (0)	1 (7.69)	0 (0)
Blowing toys (n, %)						
Bottle blowing	1 (3.45)	1 (3.45)	2 (15.38)	4 (30.77)	0 (0)	2 (15.38)
Soap bubble	1 (3.45)	3 (3.45)	0 (0)	1 (7.69)	0 (0)	0 (0)
Balloon	1 (3.45)	1 (3.45)	0 (0)	1 (7.69)	1 (7.69)	2 (15.38)
Party whistle	1 (3.45)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Used, but not specified	3 (10.34)	3 (10.34)	0 (0)	0 (0)	0 (0)	0 (0)
NR (n, %)	12 (41.38)	5 (17.24)	6 (46.15)	2 (15.38)	3 (23.08)	5 (38.46)

Legend: AAD: Assisted Autogenic Drainage; EPAP: Expiratory Positive Airway Pressure; FT: Techniques performed by the individuals' physiotherapists; H: Techniques performed at home, supervised by guardians; IEF: Increased Expiratory Flow; n: number of interviewees who performed the technique; N: number of individuals in each group; NR: did not answer the question or were unable to name which technique they performed; PEP: Positive Expiratory Pressure. Data were presented in absolute values and percentages ( ).

chest percussion (41.38%), chest compression-vibration (41.38%), and compression-decompression (27.54%) being the most applied in children. In adolescents, instrumental resources were used more, mainly the Shaker® and Respiron® (53.85% in both).

Parents were also asked about the importance of physical therapy for children and adolescents. In general, they highlighted some benefits related to the respiratory system, including: mucociliary clearance, prevention of infections, reduction of fatigue and coughing, improvement in pheripheral oxygen saturation, and assistance in the practice of physical activity. Regarding the importance of physical therapy from the point of view of the child or adolescent, 45.45% of the total sample responded. Of these, 40% were unable to verbalize why physical therapy is important, and another 40% stated that it is because "the lungs improve". Other responses included improved health, coughing up of phlegm, and the fact that they felt better after exercising. Table 3 presents the data regarding the individuals' complaints regarding CF.

Finally, data were collected regarding the presence of any new symptoms related to CF, considering the period of the last three months or since the last consultation. Most interviewees (66.08%) reported not having any new

Table 3. Individuals' complaints about CF symptoms.

Complaints from individuals N (%)	
No complaints	34 (60.72)
Pain (knees and bones)	6 (10.71)
Stomachache	5 (8.93)
Headache, nasal congestion, tiredness, or difficulty coughing up cough	4 (7.14)
Runny nose, cough and/or chest pain	3 (5.36)
They did not answer	4 (7.14)

Legend: Data are presented in absolute value and percentage () N: number of individuals; %: percentage.

symptoms, 23.21% reported the presence of symptoms such as fatigue, lack of appetite, abdominal pain, chest pain during exercise, difficulty gaining weight, and coughing, and 10.71% did not answer this question.

DISCUSSION

This study is a pioneer in describing the physiotherapy techniques and resources used in home self-management, and by other physiotherapy services, in children and adolescents with CF, followed at a reference center. We observed that most participants started physiotherapy soon after diagnosis and received respiratory care from professionals in their city. Among the interventions, manual techniques were more frequent in children, while instrumental techniques were more frequent in adolescents. Most of them followed recommendations for a daily performance of bronchial clearance techniques.

The guidelines strongly recommend daily practice of respiratory physiotherapy techniques and resources adopted by participants in self-management[15-17]. For this reason, the age and severity of the disease should be considered, used educationally and playfully in younger children, preferably[18]. In school-age children, adolescents, and adults, the most indicated devices and techniques are High Frequency Oral Oscillation (HFOO), huffing, and ventilatory exercises, respectively, since they are self-administered therapies, favoring independence and adherence to treatment[8]. Other techniques for bronchial clearance recommended for this age group are autogenic drainage, forced expiration technique, and active cycle of breathing techniques[1,8]. Of the techniques indicated, Shaker® - an HFOO - was the most cited as part of the routine of individuals, especially in those over 6 years old. According to the study by Donadio et al.[8], 52% of Brazilian patients use HFOO and 45.3% use PEP (positive expiratory pressure), with 63.6% of patients in Santa Catarina using HFOO[8]. This high frequency may be because access to this therapeutic instrument is facilitated by disease support associations, which are organized in several regions of Brazil, due to the low cost on the market and/or also due to the ease of use of the device.

In the context of instrumental resources, both HFOO and bottle blowing were mentioned by the adolescents in this study, as well as Respiron®, although the use of Respiron® is considered controversial in CF. This is because incentive spirometers are indicated to promote lung expansion in situations such as atelectasis and postoperative thoracic and abdominal surgeries[19]. Therefore, their action for bronchial clearance, a frequent condition in the pathophysiology of CF, is not an indication. The effects of spirometers in severe CF cases and lung hyperinflation still require investigation since the instrument encourages the patient to recruit accessory respiratory muscles, which generates adaptive hypertrophy, muscle shortening, and loss of flexibility, worsening ventilatory mechanics[20]. However, as evidenced in the present study, professionals still use and strongly recommend the device. It is necessary to understand the reasons for choosing the incentive spirometer since the indication of each technique must be individualized and consider the needs and particularities of each individual[1,6,8].

Regarding active or active/assisted respiratory physiotherapy techniques, expiratory flow with the glottis open (huffing) is consolidated and should be introduced into therapy as early as possible, as it allows secretions to be removed from the airways without increasing intrapulmonary pressures[1,16]. Furthermore, it can be modulated from low to high flows and volumes, and also associated with diaphragmatic control, lung re-expansion techniques, and physical exercises, increasing physiotherapy assistance and favoring mucociliary clearance[21]. However, even though it is a recommended and frequently used technique, most of the population interviewed in this study reported not knowing or not performing it. Active cycle of breathing techniques was also not mentioned in this study, which suggests that patients and guardians do not always remember the names of the techniques, despite using them. According to Donadio et al.[8], 61.1% of Brazilian patients and 66.7% of patients in the state of Santa Catarina perform huffing in their treatment.

Therapeutic toys and blowing devices are used during physiotherapy care, mainly with preschool and school-age children, adding a playful component to the care[18]. In this line, some were indicated as preferred by the individuals in the present study: bottle blowing, soap bubbles, and blowing up balloons. Among these three resources, bottle blowing is widely recommended because it is low-cost and easy to apply, in addition to preserving airway stability[22], and soap bubbles are described as favoring the improvement of physiological parameters[23]. The use of balloons is controversial and has not been encouraged in individuals with CF since the resistance to be overcome to inflate the toy can be harmful to the lungs compromised by the health condition.

In the infant age group, the use of manual therapy was mentioned most frequently by the interviewees, which corroborates the study by Donadio et al.,[8] which reported a predominance of conventional and manual techniques in infants and preschoolers. This practice is used due to the lack of autonomy characteristic of this age group. However, according to the interviewees' responses in this study, the most commonly used manual techniques were chest percussion, chest compression-vibration , and compression-decompression, which should be analyzed with caution, since the quality of the evidence for the techniques is low[24]. Furthermore, there is currently discussion about percussion approaches, such as chest percussion, which can cause discomfort to the infant and may not be completely safe, especially in fractures and airway collapse[25]. Flow clearance techniques, such as increased expiratory flow, assisted autogenic drainage, and slow and prolonged expiration, have been more recommended for care practice due to the benefits of their application and because they do not cause discomfort to infants with other health conditions[8,26]. Therefore, it is important to provide information regarding physiotherapeutic procedures. Ensuring safety and reducing adverse effects should also be a priority in the evaluation and indication of respiratory physiotherapy techniques[25].

Adherence to physiotherapy is essential and, in the pediatric population, depends on the intervention performed by the professional[1]. In the current study, more than half of the population interviewed reported performing physical therapy techniques and resources at home (58.49%). Among the most used procedures, the Shaker®, chest percussion, mechanical vibration, Respiron®, and therapeutic blowing resources and toys were mentioned. However, among individuals with CF who were able to respond, over 3 years old, 16.67% stated that they did not like physiotherapy or breathing exercises during the sessions. This finding reinforces the importance of communication between the patient, family, and professionals involved in the treatment, since this relationship is fundamental for adherence, promoting therapeutic independence and offering greater autonomy to the patient and family. Therefore, the professional needs to understand the context, reasons, and needs of the individual with CF and their family to jointly seek solutions and changes that favor adherence[1,5,15].

A Brazilian study[27] addressed adherence to treatment in patients with CF, including physiotherapy, exercise, diet, and medications, and found that 84.2% of patients underwent respiratory physiotherapy more than 5 days a week, which corroborates the findings of this investigation. Another study along the same lines revealed that 59% of individuals with CF reported high adherence to physiotherapy and 41% moderate/low adherence, with the latter group being more susceptible to hospitalizations, pulmonary complications, and consequent worsening of quality of life[28]. Individuals in the moderate/low adherence group reported that they did not follow the recommended treatment because they felt tired and did not like respiratory physiotherapy techniques[23]. Therefore, the physiotherapist should identify the preferences of each individual being treated and take advantage to associate them during therapy, seeking to personalize the care and improve adherence.

Individuals with chronic diseases need guided and supervised support by professionals in the field to manage self-care, as well as support in the process of recognizing and improving the tools to face the challenges involved in managing their health[12]. In the present study, the participants have the support of a reference center that performs evaluation, guidance, and, if necessary, quarterly referral for consultation with a multidisciplinary team. This organization facilitates the management of individuals who live in different regions of the state. Thus, the professionals involved can play an important role in ensuring the continuity and efficiency of therapy based on the guidelines provided[6,12].

This study has some limitations, such as recall bias during responses to questions, low response rate of individuals and/or their guardians, and the absence of a sample size calculation since it is a convenience sample. However, it has clinical relevance, highlighting the need to understand the physiotherapeutic techniques and resources known and directed to individuals, so that constant updating for professionals in clinical practice is reinforced.

Therefore, both individuals with CF and their families need to be guided, as early as possible and according to individual needs, as well as age group, by a physiotherapist who is a member of the team at a referral center, so that physiotherapy is continuously effective during home and regional management. We suggest that new studies may be conducted, with longitudinal monitoring of individuals, so changes in the techniques used over time can be assessed. It is also necessary to develop research with data provided by physiotherapists who treat individuals with CF at referral centers in different states, to obtain precise information on the techniques used by these professionals during physiotherapy care.

CONCLUSION

In this study, physiotherapy interventions were part of the routine of children and adolescents with CF treated at a referral center in Santa Catarina. In the care services and at home, under professional guidance, the most commonly used physiotherapy techniques in children were conventional, and in adolescents were instrumental. Participants recognized the importance of physiotherapy in maintaining health, although some report difficulties or preferences for individualized adjustments. The absence of relevant complaints, in most cases, and the few symptoms

reported, highlight the importance of a continuous and personalized approach.

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Nothing to declare.

CONFLICT OF INTEREST

Nothing to declare.

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