

Analysis of Social Skills and Functional Characteristics of Adolescents with Cerebral Palsy

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Abstract: This study aims to describe the repertoire of adolescents with cerebral palsy in relation to social skills and to characterize their levels of gross motor function, communication, and functional activities. As an analytical observational study, 15 adolescents with cerebral palsy participated: five with articulated speech and ten without articulated speech. The instruments used were Identification Form; Social Skills Inventory for Students Without Articulated Speech; Social Skills Inventory for Adolescents; Expanded and Revised Gross Motor Function Classification System; Communication Function Classification System; and Pediatric Evaluation Disability Inventory Computer Adaptive Test – Adapted Brazilian Version. With quantitative and qualitative descriptive analysis, the results did not indicate a significant difference in the total score between groups, but the participants showed developmental deficits. Adolescents without articulated speech are more motor and communicatively compromised. Studies like this can contribute to the production of knowledge in the fields of Psychology, Special Education, and Social Skills.

Keywords: cerebral palsy, adolescents, social skills

Análise de Habilidades Sociais e Características Funcionais de Adolescentes com Paralisia Cerebral

Resumo: Este estudo teve como objetivo descrever o repertório de adolescentes com paralisia cerebral em relação às habilidades sociais e caracterizar seus níveis de função motora grossa, comunicação e atividades funcionais. Sendo um estudo analítico observacional, participaram 15 adolescentes com paralisia cerebral, cinco com e dez sem fala articulada. Utilizou-se: Formulário de Identificação; Inventário de Habilidades Sociais para Alunos Sem Fala Articulada; Inventário de Habilidades Sociais para Adolescentes; Sistema de Classificação da Função Motora Grossa Ampliado e Revisado; Sistema de Classificação da Função de Comunicação; Inventário de Avaliação Pediátrica de Incapacidade Testagem Computadorizada Adaptativa Versão Brasileira Adaptada. Com análise descritiva quanti/qualitativa, os resultados não indicaram diferença significativa no escore total entre os grupos, porém os participantes apresentam déficits no desenvolvimento. Os adolescentes sem fala articulada são motora e comunicativamente mais comprometidos. Estudos como este podem contribuir para a produção de conhecimentos nas áreas da psicologia, educação especial e Habilidades Sociais.

Palavras-chave: paralisia cerebral, adolescentes, habilidades sociais

Análisis de Habilidades Sociales y Características Funcionales de Adolescentes con Parálisis Cerebral

Resumen: Este estudio tiene como objetivo describir el repertorio de adolescentes con parálisis cerebral en cuanto a las habilidades sociales y caracterizar sus niveles de función motora gruesa, comunicación y actividades funcionales. Este es un estudio observacional analítico, en el cual participaron 15 adolescentes con parálisis cerebral, cinco con lenguaje articulado y diez sin lenguaje articulado. Se utilizaron el formulario de identificación; el Inventario de Habilidades Sociales para Estudiantes sin Lenguaje Articulado; el Inventario de Habilidades Sociales para Adolescentes; el Sistema de Clasificación de la Función Motora Gruesa Ampliado y Revisado; el Sistema de Clasificación de Funciones de Comunicación; el Inventario de Evaluación Pediátrica de Discapacidad Pruebas Adaptativas Computarizadas Versión Brasileña Adaptada. Con base en el análisis descriptivo cuantitativo y cualitativo, los resultados no indicaron una diferencia significativa en el puntaje total entre los grupos, pero los participantes mostraron déficits de desarrollo. Los adolescentes sin lenguaje articulado son los más motores y más comprometidos comunicativamente. Estudios como este pueden contribuir a la producción de conocimiento en las áreas de psicología, educación especial y habilidades sociales.

Palavras-chave: paralisia cerebral, adolescentes, habilidades sociais

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Cerebral palsy is the most common cause of physical disability in children (Rosenbaum et al., 2007). Cerebral palsy is characterized as an enduring disorder in the development of movement and posture, which imply restrictions in the execution of activities, due to non-progressive disorders that occurred during fetal development or in the infant's brain (Pereira, 2018; Rosenbaum et al., 2007). Motor skills complications regularly occur along with disturbances

in sensation, perception, cognition, and behavior due to epilepsy and musculoskeletal problems (Pereira, 2018; Rosenbaum et al., 2007).

Regarding the caregivers of children with cerebral palsy, data indicate the existence of parental stress when evaluating indicators of social support and sociodemographic variables (Lima, Cardoso, & Silva, 2016). When investigating how low co-parenthood and self-efficacy of parents negatively affect the development of children, no significant correlations were found between co-parenting and self-efficacy; however, it is concluded that the mother are the main caregivers of children with cerebral palsy and basic and daily care, regarding seizures and subjective aspects, are the best results in relation to self-efficacy, even if at a lower frequency (De Souza, Ramos, & Silva, 2019). Our study addresses the issues on the development process of adolescents with cerebral palsy regarding social skills and functional activities in daily tasks, mobility, responsibility, and social/cognitive.

During adolescence, there are naturally occurring changes concerning sociocultural, emotional, sexual, and physical aspects. Adolescents with cerebral palsy face greater challenges, imposed by their own disability (Matos & Lobo, 2009). The theoretical field of Social Skills is composed of three key concepts: social performance, social skills, and social competence. Social Skills consist of a descriptive construct of social behaviors that are recognized and approved by culture. When social skills are in line with social competence, it can favor the achievement of objectives, increasing self-esteem and self-efficacy (A. Del Prette & Z.A.P. Del Prette, 2017).

According to Z.A.P. Del Prette and A. Del Prette (2017), social skills are a set of classes of social behaviors that an individual has in order to solve existing needs and issues within interpersonal relationships (Z.A.P. Del Prette & A. Del Prette, 2017). Currently, the main classes recognized by the literature as significant throughout the life cycle are: assertiveness; self-control; civility; communication; group coordination and public speaking; expression of affection; intimacy and solidarity; emotional expressiveness; ability to make and maintain friendship and manage conflicts; and solve interpersonal problems (A. Del Prette & Z.A.P. Del Prette, 2017).

The lack of an environment favorable to learning skills can result in deficits, which are: acquisition deficit (lack of ability in the repertoire), performance deficit (expressing one's behavior below what is expected), and fluency deficit (a failure in speech quality) (A. Del Prette & Z.A.P. Del Prette, 2017). Thus, social skills and a broad repertoire of social behaviors contribute to the overcoming of behavioral deficits by favoring positive indicators in the areas of health, education, profession, and psychological (Z.A.P. Del Prette & A. Del Prette, 2017).

According to Milani et al. (2019), social skills tend to provide better quality in interpersonal relationships, including the quality of parental relationships. In agreement with the aforementioned, Fogaça et al. (2019) infers that, during adolescence, social skills foster interactions, behaviors, and

favorable performances with peers and society, in addition to reducing antisocial behaviors and drug use. Additionally, the training of social skills may enhance the repertoires of the caregivers of people with cerebral palsy. Caregivers of older adults, who have used social skills more often, tend to feel less overloaded and their repertoire of social skills tends to strengthen the interpersonal relationships as caregivers, contributing to a better psychosocial adjustment (Queluz, Barham, & Del Prette, 2019).

Quiterio, Gerck, and Nunes (2017) conducted a multimodal evaluation of the social skills of students with cerebral palsy with an average age of 13.9 years, users of alternative communication. The authors investigated and described the students' repertoire through the Social Skills Inventory for Nonspeaking Individuals (SSINSI). According to the results of this instrument, the subclasses with better performance (the totality of behaviors expressed in social interactions) were assertiveness, self-control, and emotional expressiveness. Followed by the subclasses with average performance, which were communication, empathy, making and maintaining friendships, and academic social skills. Finally, the subclasses with significant deficits were civility and interpersonal problem solving. Thus, the participants presented deficits in performance and fluency, but not with the acquisition of skilled repertoire, since they express social behaviors that were acquired during the life cycle. Additionally, they showed the indispensability of studies on the promotion of social skills, training of educators, and family orientation (Quiterio et al., 2017). Quevedo and Andretta (2020) evaluated the social skills of 122 deaf and hearing children and adolescents, aged from seven to 16 years, in order to classify their social skills profile. The results showed deficits in the social skills of deaf children and adolescents in relation to their hearing peers.

As stated above, social skills and functional activities are indispensable aspects of the life cycle, favoring the development of children and adolescents with cerebral palsy, and they should be present in the interventional processes directed at this population. However, there are few national data on this subject that can support professionals working in the theoretical-practical field of the relationship between social skills and adolescents with cerebral palsy; evidencing the need to produce knowledge about the national reality, especially on the possible relationships between the specific variables of this population. Thus, this study aims to describe the repertoire of adolescents with cerebral palsy in relation to social skills and to identify their levels of gross motor function, communication, and functional activities.

Method

Participants

The sample consisted of 15 adolescents with cerebral palsy, five with articulated speech and ten without articulated speech, living in two municipalities in the state of Goiás,

Brazil. The inclusion criteria were: having a diagnosis of cerebral palsy; being aged from 12 to 19 years; and being able to understand the instruments questions.

Instruments

Identification Form: it is aimed at identifying some aspects related to personal life. It is composed of 27 questions directed to those responsible for the adolescents.

Social Skills Inventory for Students Without Articulated Speech (Inventário de Habilidades Sociais para Alunos Sem Fala Articulada – IHS-ASFA) (Quiterio, 2010): composed of 20 multiple choice items and depicts situations experienced in school by people with disabilities. The instrument is aimed at the population aged from 7 to 27 years; who may be in special school, special class, regular class, or specialized educational care; the participant must be enrolled in a school unit or have had, at least three years of schooling. For each situation depicted in each item there are three reaction as alternatives: skilled, non-skilled passive, and non-skilled active.

Social Skills Inventory for Adolescents (Inventário de Habilidades Sociais para Adolescentes – IHSA-Del-Prette) (A. Del Prette & Z.A.P. Del Prette, 2009) it is aimed at the population aged from 12 to 17 years with articulated speech. The instrument consists of 38 items that include relationship skills with different interlocutors. It is a self-reported instrument that evaluates the social skills repertoire of adolescents in everyday interpersonal situations with two indicators: the frequency and difficulty with which they react to the different demands of social interaction (A. Del Prette & Z.A.P. Del Prette, 2009). The results show whether the individual has high, average, or low difficulty in acquiring and emitting skills.

Gross Motor Function Classification System – GMFCS (Palisano et al., 1997) – *Expanded and Revised Gross Motor Function Classification System – GMFCS E&R* (Hiratuka, Matsukura, & Pfeifer, 2010; Silva, Pfeifer, & Funayama, 2010): system in which it is possible to classify the child or adolescent with cerebral palsy into five levels. The focus of the classification is on the current performance within the community, school, and household environments. The classification varies from level I, including children and adolescents with minimal or no dysfunction in relation to community mobility, walks without limitations; level II walks with limitations; level III walks using a manual mobility device; level IV, characterized by self-mobility with limitations and the possibility of using motorized mobility; level V includes subjects who are transported in a manual wheelchair, totally dependent and requiring mobility assistance.

Communication Function Classification System – CFCS (Hidecker et al., 2011) – *Communication Function Classification System – Adapted Brazilian version – CFCS* (Guedes-Granzotti et al., 2016): classification system of daily communication for individuals with cerebral palsy in five levels. Considers the levels of activity and participation in line with the International Classification of Functioning, Disability and Health (ICF): level I, in which the individual is an effective sender and receiver with unknown and known

partners; level II, in which they are an effective but slower sender or receiver with unknown or known partners; level III, in which they are an effective sender and receiver with known partners; level IV, in which they are an inconsistent sender and/or receiver with known partners; level V, in which they are rarely effective sender and receiver, even with known partners. Parents, guardians, or a professional familiar with the individual indicated their level of performance.

Pediatric Evaluation Disability Inventory – Computer Adaptive Test – PEDI-CAT (Haley, Coster, Dumas, Fragala-Pinkham, & Moed, 2012) – *Pediatric Evaluation Disability Inventory – Computer Adaptive Test – Adapted Brazilian Version – PEDI-CAT* (Mancini et al., 2016): evaluates the functioning of children and young people, from zero to 21 years of age, with different health conditions, measuring functional results (daily activities, mobility, social/cognitive, and responsibility). The form is completed by the primary caregiver or a professional who has extensive knowledge of the children's or young person's activities. The results are provided in separate scores, which are calculated for each of the four domains. The data are presented in Normative Score, Continuous Score, and Adjusted Score. The results presented in the Normative Scores consist of the T-Scores and the Percentile Ranges, portraying the performance of the child in comparison with others of the same age. The mean considered is 50 and scores between 30 and 70 are considered within the age group.

Procedure

Data collection. Data collection occurred in the first quarter of 2020. The Identification Form and the PEDI-CAT were answered by the participants' guardians; a recorder was used to record the answers; the recordings were subsequently transcribed in full and there were no difficulties in hearing the content. The application of PEDI-CAT occurred directly in the software, according to the response of those responsible for the adolescents. The classification through the GMFCS E&R and CFCS was assigned by a professional in the area. The adolescents with articulated speech participated in the application of the IHSA-Del-Prette individually; whereas the adolescents without articulated speech participated in the application of IHS-ASFA, performed in the presence of the guardians due to possible limitation of the researcher in identifying the non-verbal communication components used by some of the participants. The original format of the IHS-ASFA is applied directly with the participants and their teachers, however, in this study, there was no application with the teachers since this population was not contemplated in the study objectives.

Data analysis. The data analysis of the interviews conducted for the Identification Form occurred based on the transcripts. The PEDI-CAT software automatically generates a Detailed Assessment Report, which was used for analysis. The response sheets of the IHSA-Del-Prette were individually corrected and computerized. The IHS-ASFA Response Protocols were individually and manually corrected.

Data from the social skills instruments were submitted to specific procedures for equivalence. A number was determined for each equivalent response: number 1 was determined for the skilled (IHS-ASFA) and for respondents who presented low difficulty in issuing and acquiring skills (IHSA-Del-Prette); and number 2 was determined for the non-skilled passive and non-skilled active (IHS-ASFA) and for those that presented average and high difficulty in acquiring and emitting skills (IHSA-Del-Prette).

The total score for the self-control and assertiveness classes was directly evaluated in order to compare the results of the classes evaluated by both instruments. The empathy and civility classes are arranged separately in the IHSA-Del-Prette instrument, whereas in the IHS-ASFA instrument they are together as a single class “empathy and civility.” For analysis, “empathy” and “civility” of the IHSA-Del Prette instrument were analyzed separately and, for each analysis, the same result obtained in the class “empathy and civility” of the IHS-ASFA instrument was used. The classes “affective approach” and “social resourcefulness” in the IHSA - Del-Prette were analyzed only for the group with articulated speech and the classes “make friends,” “academic skills,” and “interpersonal problem solving” of the IHS-ASFA were analyzed only for those without articulated speech.

The quantitative analysis of the data and the test of the hypotheses were performed by non-parametric statistics; the Mann-Whitney test was used for the analysis of two independent samples (Siegel & Castellan, 2017). Non-parametric statistics can be used in cases where the data sample is small and does not require that the population distribution meets certain parameters, such as normality and homogeneity of data (Siegel & Castellan, 2017). In our study, the data do not have normal distribution regarding the variables: “with or without articulated speech,” levels of CFCS and GMFCS E&R.

Ethical Considerations

This study has been submitted and approved by the Research Ethics Committee with Human Beings of the Universidade Federal de São Carlos, CAAE: 23171419.7.0000, opinion number 3,723,977, through Plataforma Brasil.

Results

The results from the analyses are presented according to the objectives of the study. Table 1 shows the general information of the participants. Participants’ names have been replaced by codes to preserve their privacy.

Table 1

Characterization of the participants

Participant	Age	Sex	Type of School	CFCS	GMFCS E&R
PSF*1	11	Male	Special	Level III	Level V
PSF2	12	Male	Special	Level III	Level V
PSF3	13	Female	Special	Level IV	Level IV
PSF4	14	Male	Special	Level III	Level IV
PSF5	14	Male	Special	Level IV	Level IV
PSF6	16	Male	does not attend school.	Level IV	Level IV
PSF7	17	Female	Special	Level III	Level II
PSF8	17	Male	Special	Level IV	Level IV
PSF9	18	Male	Special	Level IV	Level III
PSF10	19	Male	Special	Level III	Level II
PCF**11	12	Male	Regular	Level I	Level I
PCF12	13	Female	Regular	Level I	Level I
PCF13	15	Male	Regular	Level I	Level III
PCF14	15	Female	Regular	Level I	Level II
PCF15	16	Female	Regular	Level I	Level I

Note: *Participant without articulated speech (PSF 1-10); **Participant with articulated speech (PCF 11-15); Source: Study data (2020).

Most participants are men (10) with only five women, and most are adolescents without articulated speech. When confronting the characterization of the CFCS, it is understood that adolescents without articulated speech are situated

at levels III and IV, whereas adolescents with articulated speech are at level I. In the characterization of GMFCS E&R, adolescents in the group without articulated speech are between levels II and V and adolescents with articulated

speech are in levels I, II, and III. According to the CFCS and the GMFCS E&R data regarding the participants' sex of the articulated speech group, only one male adolescent (PCF13) and one female (PCF14) were not at the level I of the GMFCS E&R functioning. In the group without articulated speech, regardless of gender, none of the participants were at level I of the CFCS and GMFCS E&R instruments. Only PSF7 and PSF10 were at GMFCS E&R level II and at CFCS level III, the others were at levels III and V, not necessarily in that order.

Regarding schooling, adolescents with articulated speech were enrolled in regular school and adolescents without articulated speech were enrolled in special school. However, one participant had not attended school for three years at the time of data collection. Regarding the type of school and the levels of GMFCS E&R and CFCS: the two female and the seven male adolescents without articulated speech were enrolled in a special school, they are between levels II and V of GMFCS E&R and in levels III and IV of the CFCS; the three female and two male adolescents with articulated speech were enrolled in regular school and they are concentrated in the first levels of the instruments. Therefore, students with greater impairment of gross motor

function and independent communication means are mostly enrolled in a special school.

The statistical analyses of the sociodemographic variables of characterization, CFCS and GMFCS E&R, of adolescents with cerebral palsy, with and without articulated speech, indicated the following results: there are significant differences in the school variables ($U = 5$; $p < 0.05$), in CFCS ($U = 0$; $p < 0.01$), and in the GMFCS E&R ($U = 3.5$; $p < 0.01$) of the two groups, as well as a significant difference between the levels of GMFCS E&R and CFCS. The school variable, presenting significant difference, can influence the other variables, especially regarding social skills. Since the school is considered an environment with various contexts, situations, and opportunities, it enables several social interactions, That is, the significant difference found may have occurred due to the adolescents with articulated speech being all enrolled in regular schools, whereas the adolescents without articulated speech were enrolled in a special school, except for the one adolescent who was not enrolled.

Table 2 shows the results of the IHS-ASFA regarding the social skills classes of adolescents without articulated speech. Table 3 shows the results of the IHSA-Del-Prette regarding the social skills classes of adolescents with articulated speech.

Table 2
Result of the Social Skills Inventory for Students Without Articulated Speech

Participant	Total Score	Empathy and civility	Assertiveness	Self-control	Make friends	Academic	Solving interpersonal problems
PSF1	NSP	NSP	NSP	NSA	SK	NSP	SK
PSF2	NSP	NSA	NSP	SK	SK	NSP	NSP
PSF3	SK	NSA	SK	SK	SK	NSA	SK
PSF4	NSP	NSP	NSP	NSP	SK	SK	SK
PSF5	NSP	SK	NSP	NSA	SK	SK	SK
PSF6	SK	SK	NSP	NSP	SK	SK	SK
PSF7	SK	NSP	NSP	NSP	SK	NSP	SK
PSF8	NSP	NSP	NSP	SK	SK	NSP	NSP
PSF9	NSA	SK	NSA	NSA	SK	SK	NSA
PSF10	NSP	NSP	NSP	NSA	NSP	NSP	NSA

Note. Source: Study data (2020).

Table 3
Result of the Social Skills Inventory for Students Without Articulated Speech

Participant	Total Score	Empathy	Civility	Assertiveness	Self-control	Affective Approach	Social Resourcefulness
PCF11	Low	High	Low	Average	Low	Low	Average
PCF12	High	Low	Average	High	High	High	High
PCF13	Average	Average	Low	Average	Low	Average	Average
PCF14	Average	Low	Low	Average	High	Low	Average
PCF15	Average	Average	Average	Low	High	Low	High

Note. Source: Study data (2020).

According to the total score of the Social Skills Inventory for Students Without Articulated Speech, three adolescents are skilled (PSF3, PSF6, and PSF7), six are non-skilled passive (PSF1, PSF2, PSF4, PSF5, PSF8, and PSF10), and one is non-skilled active (PSF9). One participant (PCF11) scored low difficulty in acquiring and emitting social skills, three (PCF13, PCF14 and PCF15) scored an average difficulty, and one (PCF12) high difficulty. Based on the Mann-Whitney test for social skills, we found no significant difference in the total score of the skills between the groups ($U = 22.5; p > 0.05$).

In the social skills classes, there is no significant difference between the groups for empathy ($U = 22.5; p > 0.05$), civility ($U = 17.5; p > 0.05$), assertiveness ($U = 22.5; p > 0.05$), and self-control ($U = 22.5; p > 0.05$). The results confirmed deficits in fluency and performance, for both groups, for the classes of empathy, civility—the group with articulated speech showed more ability in civility than the group without articulated speech—assertiveness, and self-control. In line with the results of the statistical analyses reported, there were deficits in the classes investigated, despite there being no significant difference between the groups. Data are indicative for social skills training.

Based on the outcomes of the application of the instruments, we will describe the results of the analyses obtained in the investigated groups and their relationships with the other variables. On the communicative characteristics of adolescents as opposed to social skills, we noticed a predominance of adolescents with average difficulty in

acquiring and emitting social skills at level I of the CFCS, also, we observed a predominance in level III of passive non-skilled adolescents, and of non-skilled adolescents at level IV of the CFCS. However, some adolescents with high difficulties were found at level I and skilled at level IV. When comparing the data of the skills with the data of the gross motor function, we observed that there are adolescents with high difficulty in acquiring and emitting skills who are at level I, and that there are skilled adolescents at level IV of the GMFCS E&R. However, we cannot make direct deductions between the development of social skills, and the communicative and gross motor function based on the reported data.

No significant difference was found in any group. The analyses investigated possible relationships between social skills and communicative and motor characteristics in adolescents with cerebral palsy. The lack of opportunity for development is a variable that should be considered and that is not restricted to speech articulation and motor characteristics. According to the data presented, the difficulties in social skills may be more related to the lack of interaction opportunity than to language or motor issues, although these also influence social interaction.

The PEDI-CAT instrument evaluated the functional capacity in the scales: Daily Activities, Mobility, Social/Cognitive, and Responsibility. The T-score score states that the expected score to be achieved in the instrument is between 30 and 70. Table 4 shows the data of each participant.

Table 4
T-score of the domains evaluated by the PEDI-CAT of the study

Participant	Everyday Activities	Mobility	Social / Cognitive	Responsibility
PSF1	<10	<10	<10	<10
PSF2	<10	<10	<10	<10
PSF3	<10	<10	<10	<10
PSF4	<10	<10	<10	<10
PSF5	<10	<10	<10	<10
PSF6	<10	<10	<10	<10
PSF7	<10	<10	<10	<10
PSF8	<10	<10	<10	<10
PSF9	<10	<10	<10	<10
PSF10	<10	<10	<10	<10
PCF11	32	<10	47	40
PCF12	16	14	29	37
PCF13	23	<10	40	23
PCF14	35	<10	41	38
PCF15	13	<10	44	30

Note. Source: Study data (2020).

In the field of Daily Activities most adolescents, from both groups, scored lower than expected, rectifying functional impairments on functioning and independence in activities of daily living. Based on the above, we identified the need for

questioning whether dependence is not also due to the lack of accessibility resources. In the mobility domain of the group without articulated speech, all adolescents scored < 10, which confirms that they were located at levels IV and V of the

GMFCS E&R. Four adolescents with articulated speech also presented < 10 and one (PCF12 = 14, level I in GMFCS E&R) presented > 10 . In the Social/Cognitive domain, all values were < 10 for the group without articulate speech; a < 30 (PSF5 = 29) score was found, while the other values were within the expected (PCF11 = 47; PCF13 = 40; PCF14 = 41; and PCF15 = 44). In the Responsibility domain, the T-score of the articulated speech group was < 10 , that is, it presents greater impairment since, in the group with articulated speech, one adolescent scored < 30 (PCF13 = 23) and the others within the expected range (PCF11 = 40; PCF12 = 37; PCF14 = 38; and PCF15 = 30). In all functional domains, the group without articulate speech scored lower than expected for the age group, therefore, indicating a greater functional impairment.

Another test was performed between the social skills and the functional domains of PEDI-CAT. There is a predominance of adolescents who have cores lower than expected, who are not skilled, and a predominance of those who score between 30 and 70 and have average difficulty in acquiring and emitting social skills. Although some adolescents do not have functional impairments, they require social skills training.

Discussion

The group with the greatest functional impairment was exclusively educated in special schools. According to Sanchez, Almeida, and Gonçalves (2017), students with cerebral palsy encounter many difficulties during the schooling process. This corroborates the fact that they remain, during the schooling process, in special schools, in addition to the prevalence of the conception of disability centered on the individual.

There is a significant difference between the type of school and the group in which they are inserted. Regarding social skills, data on the type of school show that adolescents in the group with articulated speech have less difficulty in emitting and acquiring civility and affective approach skills. According to Maia, Soares, and Leme (2019), the school, mainly during students transition to the sixth grade, follows the moment in which new demands arises due to the beginning of adolescence. Seventh-grade students present more sixth-grade skills, as they feel supported by family and teachers and as they mature over time. Consequently, they manage to increase their repertoire of social skills and social relations. In our study, we noticed that the only adolescent (PCF11) with the best repertoire of social skills was attending the seventh grade. We observed that adolescents who are in subsequent school classes, such as eighth and ninth grade, and first and second year of high school, presented average and high difficulty in acquiring and emitting social skills. Therefore, we believe that they may not perceive or receive the support, stimuli, and opportunities from the environment in which they are inserted to corroborate with the expansion and improvement of their social skills repertoire. Additionally, three adolescents (PCF13, PCF14, and PCF15) were

changing their school cycle at the time the data collection occurred, given that Maia et al. (2019) reported that changes in school cycles, when coinciding with adolescence, can be challenging since students manage to establish more complex relationships with the school environment, while new learning experiences also occur (Maia et al., 2019).

According to Lessa, Felicio, and Almeida (2017), the promotion of social skills can occur within the school context by providing opportunities for social interactions and increasing an adequate repertoire for students. It was found that in regular schools, as opposed to special ones, more contexts and opportunities are offered for the development of complex interactions and relationships with their environment, since, special ones restrict the interactions to the class due to the provision of service focused on rehabilitation. However, it is necessary to rethink the opportunities offered in school environments so that they consider the functional levels of adolescents and corroborate with inclusion. Functional levels are strictly linked to the development of social skills and, within the adolescents surveyed, there is a tendency in the total score to average and high difficulty in the acquisition and emission of social skills.

In accordance with the aforementioned reports and according to Maia et al. (2019), as new bonds are formed, there is an increase in the autonomy and independence of adolescents. In our research, when analyzing the data of the social resourcefulness class, we observed that adolescents with articulated speech expressed high and average difficulty, that is, opportunities offered in the environments are fundamental for the development of a skilled and competent repertoire, which are made possible by a Special and Inclusive Education. We understand that by training their social skills and changing the context of the school – with the provision of assistive technology resources, especially those of Alternative and Expanded Communication – adolescents with cerebral palsy may have a greater development and social interaction, thus changing their current situation.

In our study, the best performance within the group with articulated speech was: (a) civility and (b) affective approach. In the group without articulated speech, the following classes presented better performance: (a) friendship and (b) interpersonal problems. The data diverge from the outcomes presented by Quiterio et al. (2017), in which better performance was shown in the classes of: (a) assertiveness, (b) self-control, and (c) emotional expressiveness; partial performance: (a) communication, (b) empathy, (c) making and maintaining friendships and (d) academics; and significant deficits: (a) civility and (b) interpersonal problem solving. We can infer that a more skilled repertoires is linked to the increase of stimuli to which adolescents are exposed since childhood. Therefore, by rethinking society and culture, we can offer new active opportunities and formative experiences to these adolescents as a society, in public and private spaces. This research indicates the relevance of a cultural and social change in which the environment, in fact, stimulates an active, significant, and formative life. We can target adolescents with cerebral palsy through social skills training, directing

their performance so that it is close to what is expected in the social situations of a given culture, due to the preventive or therapeutic character that it can assume.

Regarding characterization of the social skills repertoire, the investigation of the variables of interest was limited since there is no diversity of instruments aimed at this population at a national level; thus, we suggest the development and/or adaptation of instruments that target this public and identify the different types of deficits. As a positive point, having the contact of informants from the adolescents' conviviality favored data collection according to the methodological path outlined.

Our study highlights the relevance of early interventions in the cognitive and adaptive development of the child, in addition to the notoriety of rethinking the spaces and practices of schooling, considering the functional levels that students can present. This study showed the inevitable role of governmental spheres in the execution of changes to the school and health systems aiming towards inclusion, as well as keeping close to these adolescents the people who help and invest in the development of their repertoire, such as teachers, family members, and close professionals. Finally, we highlight the need for research involving adolescents with cerebral palsy and different areas of knowledge, such as psychology related to mental health, anxiety, depression, professional guidance, social experiences, and the implications of interventions in the field of Special Education.

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