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Assessment of the intervention process with teacher to prevent children behavior problems

Avaliação do processo de intervenção com professores para prevenção a problemas de comportamento infantil

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Abstract

Objective

The prevalence of emotional and behavioral problems reaches 30% of school-age Brazilians. Management by teachers can reinforce such difficulties and, therefore, it is essential to assess interventions to provide them with the best tools available. In this study, it was aimed to present the development and implementation of the Facilitating Contact with Students Program was implemented in early grade teachers.

Method

The process of two modalities of this Program was evaluated: G1 (with a full program) and G2 (with a partial program, without the cognitive model contents, only instruction about behavioral management techniques and socioemotional support).

Results

The G1 gave better scores to the intervention on the importance and usefulness of the contents.

Conclusion

The teacher’s knowledge regarding the cognitive model is relevant for the modification of disruptive behaviors of students in the classroom.

Keywords: Child behavior; Cognitive behavioral therapy; Process assessment; School teacher.

Resumo

Objetivo

A prevalência de problemas emocionais e de comportamento chega a 30% em brasileiros em idade escolar. O manejo pelos professores pode reforçar tais dificuldades e, portanto, é fundamental

avaliar intervenções para instrumentalizá-los. Objetivou-se apresentar o desenvolvimento e a implementação do Programa Facilitando o convívio com Alunos em docentes de séries iniciais.

Método

Avaliou-se o processo de duas modalidades desta intervenção: G1, recebeu a intervenção de forma completa, e G2, recebeu a intervenção de forma parcial, priorizando-se a instrução sobre técnicas comportamentais de manejo e apoio socioemocional e excluindo-se o conteúdo do modelo cognitivo.

Resultados

O G1 avaliou melhor a intervenção quanto a importância e utilidade do conteúdo.

Conclusão

O conhecimento do modelo cognitivo por parte do professor é relevante para a modificação de comportamentos perturbadores de alunos em sala de aula.

Palavras-chave: *Comportamento infantil; Terapia cognitivo-comportamental; Avaliação de processo; Professores escolares.*

It is known that behavior problems can have a negative impact on child development, resulting in losses in the different contexts in which they are inserted, such as family and school (Lopes et al., 2016). The most common problems found are aggression, concentration difficulties, and symptoms of anxiety and mood disorders (Lopes et al., 2016), which, when developed in early childhood, can continue over the following years, causing damage in the social, academic, financial, and legal spheres (Hamre et al., 2014; Marin et al., 2018; Moksnes et al., 2016; Santos & Celeri, 2018).

The teacher's instrumentation to deal with problems arising from child behavior has been associated with an increase in their well-being, as well as that of their students, due to the promotion of the quality of the school climate (Taylor et al., 2017). Furthermore, classroom management and positive teacher-child interactions are also important domains for the child's socio-emotional (Broekhuizen et al., 2016; Downer et al., 2010) and academic (Vernon-Feagans et al., 2019).

Based on the findings regarding the teacher's role and performance and the evidence on their influence on the behavior of their students, studies are needed on strategies that can help teachers, especially on the process and results of interventions aimed at the school context (Durlak, 2016; Taylor et al., 2017). Although there have been several intervention programs in schools, many do not present a systematization on their implementation and assessment (Durlak, 2016; Meyers et al., 2012). In this sense, division 16 of the American Psychological Association, which organizes and studies evidence-based practices in educational contexts, has been concerned with the development of manuals – not only for interventions, but also for other practices of school psychologists (Gadke et al., 2021).

Considering the most used approaches in interventions in the school context, in this study the development and implementation of a transtheoretical intervention will be presented – the *Programa FAcilitando o conVívio com Alunos* (FAVA, Facilitating Contact with Students Program). It is a training for teachers in the early grades of elementary school considering the knowledge of three distinct theoretical contributions: the cognitive model of the Cognitive-Behavioral Approach (CBA) (Beck et al., 2015), Socio-Emotional Learning (Collaborative for Academic, Social, and Emotional Learning, 2017), and behavioral theory (Skinner, 1975), including positive student interaction practices and behavior management (Fava, 2017). This program has been conducted by the first author for more than ten years, and proposes that, for teachers to assist in the development of their students' socio-emotional skills and to be able to manage disruptive and challenging behaviors in classroom, it is necessary that they themselves be able to monitor their thoughts and take advantage of emotional and behavioral self-management strategies. It is noteworthy that no records of interventions based on the cognitive model for teachers were found in the literature, in addition, there has been discussion

about bringing evidence-based practices from one context to another, such as cognitive-behavioral psychotherapies to schools (Atkins et al., 2015).

Considering the unprecedented nature of the proposed intervention, the importance of process assessment is evident, which makes it possible to monitor the implementation of intervention proposals, signaling the necessary modifications to assess their results and future replications (Fava et al., 2020; Murta, 2007). In general, topics related to difficulties that participants may have had to adhere to the intervention and their assiduity are assessed; the physical context of the implementation premises; the coordinator/person applying the intervention (knowledge, availability, etc.); and the variables of the program itself, such as an assessment of the importance of the contents, applicability and dosage provided (Murta, 2007). Specifically, the organization of the activity, the conduct of the coordinator, the contents, and the teachers' perception regarding their participation in the intervention were examined.

Method

Participants

A total of 452 teachers from the first to the third grade Elementary School from all municipal schools in a city in the countryside of the state of Rio Grande do Sul (Brazil) were invited, which has the largest number of municipal schools in the state. This was made possible by the Municipal Secretariat of Education (MSE) through an e-mail and an internal memorandum.

For the purposes of organizing schools, in order to avoid them not having enough teachers to conduct school activities, the allocation of the sample was conducted according to the number of classes per grade to facilitate their replacement, ensuring that students did not miss classes during the intervention period. Two groups were formed with the following distribution between the grades: Group 1 - G1 (1st grade = 35.8%; 2nd grade = 24.7%; 3rd grade = 39.5%) and Group 2 - G2 (1st grade = 29%; 2nd grade = 35.5%; 3rd grade = 35.5%). No differences were found between the groups regarding the distribution of teachers by school grades ($p = 0.51$; Chi-Square test).

The G1 was composed of 101 teachers from 43 schools that underwent the intervention in March and April 2019. G2 consisted of 56 teachers from 18 schools that underwent the intervention in April and May 2019. Participation was not mandatory and the MSE authorized excused absence for those who wanted to do so. There was a sample loss of 14% in G1 and 7% in G2. Teachers who expressed interest but were unable to participate were allocated to a control group, which was not considered for analysis in this study.

As for characterization, 97.8% of G1 were women, married or common-law partners (74%), who had a median of two children (1st - 3rd quartile: 1.0-2.0). G2 was also 94.9% female, mostly married or common-law partners (79.5%), and with a median of one child (1st - 3rd quartile: 1.0-2.0). Regarding the comparison between groups on gender ($p = 0.44$), number of children ($p = 0.99$), and common-law partners ($p = 0.05$) no significant differences were identified.

Complete higher education was the predominant educational level in both groups (G1 = 96.7%; G2 = 94.9%). Most teachers worked only in the municipal school system, with a small percentage of each group working in private schools (G1 = 7.6%; G2 = 4%). Furthermore, 46.2% of G1 and G2 participants worked in two schools, while only 1.1% of G1 worked in three schools. Regarding family income, for G1 there was the following variation: 25% had an income of less than three, 48.2% had as income of up to five, and 26.4% had an income of six or more minimum salaries. In the G2, 16.7% had as income of up to three, 52.6% up to five, and 31.6% six or more minimum salaries. No significant differences were identified between the groups in relation to these variables.

Instruments

Sociodemographic and Employment Data Questionnaires for Teachers: developed for this study in order to obtain information on social, demographic, and employment characteristics of teachers, such as, for example, family configuration, training, total length of service and length of service at the current institution, etc.

Process Assessment Questionnaire: developed for this study to assess how participants perceived the intervention at each meeting. Consisting of 15 items answered on a Likert-type scale that varied according to the assessment of the program and organization of the activity (premises and facilities, teaching material, and training workload), coordinator (demonstration of knowledge of the contents, ability to answer questions, relationship between theory and practice, and teaching/didactic method), contents (previous knowledge about the subject, importance and usefulness of contents), and self-assessment (feeling of well-being, perception of having slept well last night, difficulties in eating before intervention and getting ready to leave home, and the feeling of being involved with the meeting). The scale is organized so that the items referring to the program, organization and coordinator were assessed and marked as (1) excellent, (2) good, (3) fair, or (4) poor, while the items referring to the importance of the contents in (1) high, (2) low, or (3) none. Finally, the self-assessment items met the scale (1) excellent, (2) good, (3) fair, or (4) poor.

The FAVA Program: the intervention was developed from two distinct groups: G1, with the complete intervention, with four meetings lasting three and a half hours each, covering the contents referring to modules 1 to 4, and G2, with the partial intervention, with two three-and-a-half-hour meetings and the contents relating to modules 2, 3, and 4. Table 1 presents a description of the contents covered in the intervention in each module.

Table 1
Description of the Facilitando o Convívio com Alunos program

Module	Contents
1- Cognitive-behavioral model	<ul style="list-style-type: none"> - How does our mind work? - Why do we think the way we do? - How is the thought pattern built? - Principles of the cognitive-behavioral approach: <ul style="list-style-type: none"> *Thought can be monitored. *Thought can be changed. * By modifying the thought, it is possible to change the behavior. - Self-monitoring applied to the school context. - Cognitive distortions in the context of the teacher. - Modification of cognitive distortions and the impact on behavior towards the student.
2- Socio-emotional development and socio-emotional education	<ul style="list-style-type: none"> - What socio-emotional development is. - What socio-emotional skills / competences are. - How socioemotional skills are acquired. - The relationship between socio-emotional skills, child development, and behavior. - Helping children identify and manage emotions. - Emotional self-awareness and emotional regulation of the teacher.
3- Interaction styles between teacher and student and active observation of child behavior	<ul style="list-style-type: none"> - What are the styles of interaction between adults and children? - What are the consequences of interaction styles on the behavior of children? - Support and validation of emotion in students. - Definition of child behavior problems and expected behavior according to age group. - Active observation. - Principles of functional behavior analysis applied to the school context. - Maintenance of the behavior problem. - Principles of operant conditioning (behavior modification).
4- Management of dysfunctional behavior and promotion of functional and assertive behaviors	<ul style="list-style-type: none"> - Types of consequences for dysfunctional behaviors in the classroom. - Social reinforcement in the school context. - Resolution of social conflicts. - Promoting understanding and empathic and prosocial conducts among children (direct interventions and class assemblies). - Classroom routine. - Use of visual cues. - Distraction as a disruptive behavior modification technique. - Dealing with children who exhibit aggressive behavior. - Group points system for behavior modification and encouraging good behavior.

Procedures

This study is part of a larger research project that was approved by the Research Ethics Committee (CAAE nº 09173319.2.0000.5344). Therefore, the ethical requirements of research with human beings were met.

The FAVA Program meetings were held from 8 am to 11:30 am and from 1:30 pm to 5 pm, with a 10-minute break when coffee was offered to the participants. The MSE provided an auditorium for training, a place that teachers already used to attend other meetings scheduled in the school calendar. In the first meeting, the teachers answered the Sociodemographic and Employment Data Questionnaire and at the end of the programming of each of the scheduled meetings, they received the Process Assessment Questionnaire, filled it out anonymously and handed it in when leaving, when they also received a certificate of presence to present at their workplace and not having any financial discounts from their salaries, for their absence was justified.

The contents provided for in the intervention were always given by the same coordinator in both groups, making use of the exploration of practical examples to illustrate the theory. The discussion of situations presented by the teachers was also contemplated. The coordinator, who is also the first author of this study, is a psychologist specializing in clinical psychology by the Federal Council of Psychology and in Cognitive-Behavioral Psychotherapy, in addition to being a certified therapist by the Brazilian Federation of Cognitive Therapies, with more than 12 years of practice using this approach, both in her clinic and in school contexts. Although there is no consensus, some studies have indicated that the author's involvement in the intervention does not significantly alter its results (Wigelsworth et al., 2016).

Descriptive statistics were used, with the study of normality of data distribution using the Kolmogorov-Smirnov test, which indicated a non-normal distribution ($p < 0.00$). Therefore, for the comparison and verification of differences between G1 and G2, the Mann-Whitney test was used. Data were analyzed using the IBM®SPSS® Statistics for Windows (version 25.0), and for statistical decision criteria, a significance level of 5% was adopted.

Results

Considering the objective of assessing the process of the FAVA Program, the data related to the variables of the assessment instrument of the same are presented. These are all detailed in Table 2. The N values that appear in the table are greater than the number of participants in each group, as the process assessment questionnaire was answered at the end of each meeting, therefore, it was answered four times by G1 participants and twice by G2 participants.

Discussion

Pondering the assessment of the process is based on bringing interventions closer to real-world contexts, even though it is difficult to control all the variables that may influence them (Meyers et al., 2012). Considering the complexity of the components of the implementation of an intervention, among the multiple variables with the potential of affecting its results, the following stand out: the characteristics of the transmitted information, such as preventing people from different groups from communicating or that participants receive another route information on the

Table 2

Process assessment

1 of 3

Variables	G1	G2	<i>p</i>
	%		
Activity organization			
Premises and facilities			0.33
Poor	00.5	-	
Fair	07.3	12.4	
Good	62.4	48.5	
Excellent	29.8	39.2	
	N = 386	N = 97	
Teaching material (PowerPoint slides and use of whiteboard)			0.09
Poor	-	-	
Fair	01.0	2.1	
Good	30.7	38.5	
Excellent	68.3	59.4	
	N = 388	N = 96	
Training workload (two shifts for G2 and four shifts for G1)			0.36
Poor	03.0	01.0	
Fair	01.5	07.2	
Good	55.0	48.5	
Excellent	43.2	43.3	
	N = 391	N = 97	
Coordinator			
Coordinator's knowledge regarding the contents			0.09
Good	11.7	18.6	
Excellent	88.3	81.4	
	N = 392	N = 97	
Availability of the coordinator to answer questions			0.28
Fair	01.8	01.0	
Good	20.2	26.5	
Excellent	78.0	72.4	
	N = 391	N = 98	
Relationship between theory and practice			0.25
Fair	02.3	6.1	
Good	33.3	34.7	
Excellent	64.4	59.2	
	N = 390	N = 98	
Teaching and didactic methodology			0.25
Fair	00.5	1.0	
Good	30.6	36.1	
Excellent	68.9	62.9	
	N = 392	N = 97	
Contents			
Participant's prior knowledge of the subject			0.22
None	011.5	5.2	
Low	81.3	88.7	
High	07.2	6.2	
	N = 391	N = 97	
Importance of contents			0.03*
Low	01.3	5.3	
High	98.7	94.7	
	N = 378	N = 94	
Usefulness of contents			0.02*
Low	01.6	6.4	
High	98.4	93.6	
	N = 385	N = 94	

Table 2

Process assessment

2 of 3

Variables	G1	G2	<i>p</i>
	%		
Self-assessment			
Feeling of well-being			0.00*
Poor	01.5	-	
Fair	11.0	04.1	
Good	73.2	67.3	
Excellent	14.3	28.6	
	<i>N</i> = 392	<i>N</i> = 98	
Perception of having slept well last night			0.23
Poor	3.6	02.0	
Fair	22.4	19.4	
Good	58.4	59.2	
Excellent	15.6	19.4	
	<i>N</i> = 392	<i>N</i> = 98	
Difficulties in eating before the intervention			0.05*
Yes	9.2	3.1	
No	90.8	96.9	
	<i>N</i> = 391	<i>N</i> = 98	
Difficulties getting ready to leave home			1.00
Yes	9.5	09.2	
No	90.5	90.8	
	<i>N</i> = 391	<i>N</i> = 98	
Feeling of being involved with the meetings			0.63
Yes	98.7	97.9	
No	1.3	2.1	
	<i>N</i> = 390	<i>N</i> = 96	
Activity organization			
Premises and facilities			0.33
Poor	0.5	-	
Fair	7.3	12.4	
Good	62.4	48.5	
Excellent	29.8	39.2	
	<i>N</i> = 386	<i>N</i> = 97	
Teaching material (PowerPoint slides and use of whiteboard)			0.09
Poor	-	-	
Fair	1.0	2.1	
Good	30.7	38.5	
Excellent	68.3	59.4	
	<i>N</i> = 388	<i>N</i> = 96	
Training workload (two shifts for G2 and four shifts for G1)			0.36
Poor	3.0	1.0	
Fair	1.5	7.2	
Good	55.0	48.5	
Excellent	43.2	43.3	
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Coordinator			
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Table 2

Process assessment

3 of 3

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	N = 392	N = 98	
Difficulties in eating before the intervention			0.05*
Yes	09.2	03.1	
No	90.8	96.9	
	N = 391	N = 98	
Difficulties getting ready to leave home			1.00
Yes	9.5	09.2	
No	90.5	90.8	
	N = 391	N = 98	
Feeling of being involved with the meetings			0.63
Yes	98.7	97.9	
No	01.3	02.1	
	N = 390	N = 96	

Note: *Significance level: $p < 0.05$.

N: Participants.

same subject; the responsiveness and involvement of the participant; and perceptions about the physical characteristics of the premises measured by self-report instruments, as used in this study, direct observation or other forms (Dane & Schneider, 1998; Durlak & Dupre, 2008). For example, if some participants have health problems, such as a headache on the day of the intervention, impairing their well-being, this may lead them to misjudge the contents. Just as if the premises has a technical problem, such as a power outage, participants can get bored waiting for a solution. In this sense, the assessment of the process plays a fundamental role in exploring possible intervening variables to be considered for the improvement of the intervention and control in future analyzes of effectiveness.

In view of the objective of the present study, each aspect of the program that was assessed will be presented and discussed. Regarding its organization, in general, it was positively analyzed regarding all the considered criteria. The teaching material, in particular, stood out as having good to excellent quality in the perception of teachers, with a tendency to better scores in G1 ($p = 0.09$). Regarding the workload, despite the contents being different between G1 and G2, the perception about it was not different between the two groups. Such data may suggest that shorter interventions may have the same effect or level of satisfaction as longer interventions. The literature has already suggested that a lengthy program or intervention can be a barrier to research (Smith et al., 2015).

Important aspects of the interventions regarding their fidelity include the dimensions 1) adherence, which is the degree to which the individuals responsible for applying the intervention follow what is foreseen in the manual; 2) dosage, which refers to the amount of content per session; 3) application quality, which assesses the skill and understanding of the individuals responsible for applying and conducting the intervention; 4) engagement, which refers to the degree to which participants get involved in the proposed tasks; and 5) differentiation, which would be related to how much the intervention achieves immediate results in addition to the final outcomes (Pérez et al., 2015). To meet the dimensions presented in items 1 and 2, the intervention coordinator was always the same in all groups, following the manual according to the order in which the contents were exposed at each meeting. The Process Assessment Questionnaire assessed the participants' perception of items 3 and 4 and the spontaneous comments from the teachers to the coordinator were recorded in writing during all meetings, which helped to understand the motivation and global perception of the intervention as having a short-term result.

Specifically, the variables that referred to the intervention coordinator did not differ between the groups. This suggests that the coordinator was able to have the same level of involvement and commitment in conducting both types of intervention. On the other hand, there was a difference between the groups regarding the importance of the contents, being perceived as more significant for G1 than for G2 ($p = 0.03$). The perception of the usefulness of the contents for classroom practice was also different, since G1 considered it more useful than G2 ($p = 0.02$). The essential difference between G1 and G2 in relation to these variables were the contents about the cognitive model, a central component of the CBA and present only for the first group.

The CBA has been used to support several interventions aimed at students implemented in schools, as it is characterized for being focused on the development of skills for emotional regulation and easily applied in different contexts (Paternostro et al., 2015). Such interventions address strategies such as problem solving, emotion regulation, or students' social skills (Marin & Fava, 2020; Murray et al., 2019). The three underlying principles of the CBA are: 1) cognitive activity influences emotions and behaviors, 2) cognitive activity can be monitored and changed, and 3) by modifying the cognitive pattern it is possible to change emotions and behaviors (Beck et al., 2015). This process comprises the cognitive model and the use of the fundamentals of this approach in

training for teachers, aiming to prevent indicators of problems perceived in students from negatively impacting their development, since teachers can help to maintain or worsen symptoms, depending on the way they perceive events in the classroom. As teachers manage to establish less distorted interpretations and thoughts, the attitudes employed can be more assertive in promoting the socio-emotional development of their students.

However, a fundamental part of the CBA outside the clinical setting has not yet been found in the scientific literature, which is psychoeducation on the cognitive model aimed at the teacher. Psychoeducation is one of the essential elements for the structure of work in this approach and its general objectives are to stimulate the learning process and the effectiveness of the intervention, in addition to helping individuals to build effective coping strategies (Knijnik & Kunzler, 2014; Kunzler & Araujo, 2013). The intervention of the present study proposed that interventions aimed at changing teachers' biases and cognitive distortions about children's behavior and their own educational practices can modify them.

Regarding teacher self-assessment, G2 had a better sense of well-being than G1 ($p = 0.001$). There was also a difference in terms of difficulty in eating, with G1 having more difficulty than G2 ($p = 0.05$). It is known that hunger can impair motivation (Maslow, 1943) – however, the perception between the groups was not different regarding other variables related to the organization of the program, as well as to their well-being and, as seen, G1 provided better scores in relation to the contents of the intervention.

The process assessment data were endorsed by the spontaneous manifestations of the teachers. Such reports indicated the importance of the contents covered and the interest of the participants in a greater workload to discuss it, as well as in continuing education on the cognitive model. G1 teachers reported: "I think I will be able to identify my thoughts and I will make a continuous effort to change, but if we could have a weekly space for someone to listen to us and guide us, it would be much easier"; "This training had to be longer because the time we have here with you goes by so quickly. It would be nice if you had more time to discuss other room examples". The G1 participants also mentioned the generalization of learning outside the school context, exposing experiences of greater emotional control in the face of the opportunity to monitor and modify thoughts and behaviors in domestic situations:

Yesterday I was able to realize that what made me angry was my thought of being wronged by my husband! I took a deep breath and generated an alternative thought which was that he cannot follow my ideas because it is hard for him and not because he does not value me. I got in the car again and behaved differently: instead of charging I just moved on.

This ability to pay attention to one's own functioning is developed within the cognitive model through the concept called self-monitoring. This ability is part of a broader construct called metacognition, which comprises beliefs, processes and strategies that identify, monitor, or control cognitions (Wenzel, 2020). Self-monitoring, in this context, enabled teachers to identify/observe their own cognitions and monitor them. In this sense, it is fundamental for teacher-student behavioral management in the face of difficult situations to manage in the classroom environment.

In all G1 meetings, more than one participant indicated that the cognitive model was a totally new subject for them and, also, that it was the most useful in the training: "Finally, something that stops just teaching us what to do with children and looks at what's going on within us!" Finally, there was an interest in the municipality offering supervision by psychologists to teachers on the management of difficult cases in the classroom: "It would be good if you could come back more often so that we can supervise what you apply after here"; "We had guidance from our psychologist

(referring to the educational psychologist) and I know she works that way too. If we could have more time with her, it would be a more accessible way for the MSE than bringing people from outside for it.”

Considering these findings, it is prudent to think that the teacher can respond better to interventions that direct their contents more to themselves and not only to their students. In the school environment, where there is an intense flow of interactions, teachers and students are constantly expressing and interpreting each other’s emotional states and behaviors. For example, a teacher who tends to interpret that his students do not respect him, instead of understanding the difficulties inherent to each one, may compromise their understanding and supportive role. On the other hand, a student who tends to think that their performance is worse than everyone else’s, may think that their friends make fun of the results obtained in the activities they perform. In this sense, the main direction to improve the intervention presented in this study, considering the results obtained, is to increase the time of the intervention destined to the contents of the cognitive model and to split the other contents in less time.

Conclusion

Despite the assessment of interventions being an important scientific research activity, the quality of descriptions of interventions in publications is still fragile. This study sought to assess the implementation process of the FAVA Program, in a sample of teachers from the early years of elementary school, examining the organization of the activity, the conduct of the coordinator, the contents, as well as their perception regarding their participation in the intervention. It is believed that, in this way, it is possible to understand which aspects the participants did not appreciate, enjoyed more, or that may have contributed to the sample loss during the research.

Regarding the contents of the intervention, it is understood that offering opportunities for training and reflection for teachers based on the cognitive model can benefit the school context, since it makes it possible to understand situations in a less distorted way and promote recognition, identification, and modification of dysfunctional emotional and cognitive patterns, producing less emotional discomfort for teachers, which is essential for them to establish positive interactions with their students. In this way, knowing how to monitor and regulate cognitive activity may have provided theoretical and practical substrate to teachers, being essential for a greater well-being in the classroom.

Since this research demonstrated that the perception of cognitive model contents presents a significant difference between the groups, making the intervention more relevant and useful to the teachers who participated in this module, it is suggested that other studies can advance this subject. Suggestions for further research are, in addition to a greater number of participants, to track possible events that conflict with interventions in the school environment. One of the factors that contributed to the sample loss in G2, although it was a low loss when compared to G1, was that some teachers received mandatory continuing education in the same period, not allowing them to attend the second meeting of the Program. A larger sample would help to control sample loss and could lead to different results.

The use of self-report measures stands out as the main limitation because, despite being used in most studies, it can lead to personal biases in the assessment of the process by each participant. In this sense, the inclusion of observation measures or instruments parallel to self-report can minimize such effects. It is also pointed out that some variables analyzed suggest care to be taken in future interventions, requiring planning, such as characteristics of the premises and facilities,

which were assessed by both groups as “good” and not as “excellent.” These subtleties can make a difference in the perception and results of the intervention.

Organizing interventions in schools is a challenge for researchers, because taking teachers out of their classes during working hours can impair student performance, and replacement lessons may not be motivating for professionals. Also, internal and external political scenarios can influence the development of training programs for a class that tends to feel very overloaded. In an attempt to reduce this discomfort, the FAVA Program focused on equipping them in a continuing education course format instead of imposing manuals or tasks to be conducted with their students. It is expected that further studies, in addition to using the cognitive model as a basis for interventions for teachers, will assess the process of its implementation in different samples. In this way, new investments can contribute to improving programs and better meeting the demands of mental health in the school context.

References

- Atkins, M. S., Shernoff, E. S., Frazier, S. L., Schoenwald, S. K., Cappella, E., Martinez-Lora, A., Mehta, T. G., Lakind, D., Cua, G., Bhaumik, R., & Bhaumik, D. (2015). Redesigning community mental health services for urban children: supporting schooling to promote mental health. *Journal of Consulting and Clinical Psychology, 83*(5), 839-852. <https://doi.org/10.1037/a0039661>
- Beck, A. T., Davis, D. D., & Freeman, A. (2015). *Cognitive therapy of personality disorders*. Guilford Publications.
- Broekhuizen, M. L., Mokrova, I. L., Burchinal, M. R., Garrett-Peters, P. T., & Family Life Project Key Investigators. (2016). Classroom quality at pre-kindergarten and kindergarten and children’s social skills and behavior problems. *Early Childhood Research Quarterly, 36*, 212-222. <https://doi.org/10.1016/j.ecresq.2016.01.005>
- Collaborative for Academic, Social, and Emotional Learning (2017). *Framework for systemic social and emotional learning*. Retrieve from: <https://measuringup.casel.org/wp-content/uploads/2019/08/AWG-Framework-Series-B.2.pdf>
- Dane, A. V., & Schneider, B. H. (1998). Program integrity in primary and early secondary prevention: are implementation effects out of control? *Clinical Psychology Review, 18*(1), 23-45. [https://doi.org/10.1016/S0272-7358\(97\)00043-3](https://doi.org/10.1016/S0272-7358(97)00043-3)
- Downer, J., Sabol, T. J., & Hamre, B. (2010). Teacher-child interactions in the classroom: toward a theory of within- and cross-domain links to children’s developmental outcomes. *Early Education & Development, 21*, 699-723. <https://doi.org/10.1080/10409289.2010.497453>
- Durlak, J. A. (2016). Programme implementation in social and emotional learning: basic issues and research findings. *Cambridge Journal of Education, 46*(3), 333-345. <https://doi.org/10.1080/0305764X.2016.1142504>
- Durlak, J. A., & DuPre, E. P. (2008). Implementation matters: a review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American Journal of Community Psychology, 41*(3-4), 327-350. <https://doi.org/10.1007/s10464-008-9165-0>
- Fava, D. C. (2017). *Guia prático do professor: atuando com crianças na primeira infância*. Artesã.
- Fava, D. C., Hiratuca, M. H. U., Molina, M., Ghedin, J. M., & Marin, A. H. (2020). Intervenções com professores para ajustamento do comportamento infantil: revisão sistemática da literatura. *Contextos Clínicos, 13*(1), 221-243. <https://doi.org/10.4013/ctc.2020.131.11>
- Gadke, D. L., Kratochwill, T. R., & Gettinger, M. (2021). Incorporating feasibility protocols in intervention research. *Journal of School Psychology, 84*, 1-18. <https://doi.org/10.1016/j.jsp.2020.11.004>
- Hamre, B., Hatfield, B., Pianta, R., & Jamil, F. (2014). Evidence for general and domain-specific elements of teacher-child interactions: associations with preschool children’s development. *Child Development, 85*(3), 1257-1274. <https://doi.org/10.1111/cdev.12184>

- Knijnik, D. Z., & Kunzler, L. (2014). Psicoeducação e reestruturação cognitiva. In Melo, W. V. (Ed.), *Estratégias psicoterápicas e a terceira onda em terapias cognitivas* (pp. 24-56). Sinopsys.
- Kunzler L. S., & Araujo T. C. C. F. (2013). Cognitive therapy: using a specific technique to improve quality of life and health. *Estudos de Psicologia* (Campinas), 30(2), 267-274. <http://dx.doi.org/10.1590/S0103-166X2013000200013>
- Lopes, C. S., Abreu, G. D. A., Santos, D. F. D., Menezes, P. R., Carvalho, K. M. B. D., Cunha, C. D. F., Vasconcellos, M. T. L., Bloch, K. V., & Szklo, M. (2016). ERICA: prevalência de transtornos mentais comuns em adolescentes brasileiros. *Revista de Saúde Pública*, 50(1), 1-9. <https://doi.org/10.1590/s01518-8787.2016050006690>
- Marin, A. H., Borba, B. M. R., & Bolsoni-Silva, A. T. (2018). Problemas emocionais e de comportamento e reprovação escolar: estudo de caso-controle com adolescentes. *Revista Psicologia: Teoria e Prática*, 20(3), 283-298. <http://dx.doi.org/10.5935/1980-6906/psicologia.v20n3p299-313>
- Marin, A. H., & Fava, D. C. (2020). Programas de Intervenção no contexto escolar: revisão da literatura científica. In Fava, D. C. (Ed.), *A prática da psicologia na escola: introduzindo a abordagem cognitivo-comportamental* (2nd ed., pp. 327-355). Artesã.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370-396. <https://doi.org/10.1037/h0054346>
- Meyers, D. C., Durlak, J. A., & Wandersman, A. (2012). The quality implementation framework: a synthesis of critical steps in the implementation process. *American Journal of Community Psychology*, 50(3-4), 462-480. <https://doi.org/10.1007/s10464-012-9522-x>
- Moksnes, U. K., Lohre, A., Lillefjell, M., Byrne, D. G., & Haugan, G. (2016). The association between school stress, life satisfaction and depressive symptoms in adolescents: life satisfaction as a potential mediator. *Social Indicators Research*, 125(1), 339-357. <https://doi.org/10.1007/s11205-014-0842-0>
- Murray, A. L., Booth, T., Eisner, M., Ribeaud, D., McKenzie, K., & Murray, G. (2019). An analysis of response shifts in teacher reports associated with the use of a universal school-based intervention to reduce externalizing behaviour. *Prevention Science*, 20(8), 1265-1273.
- Murta, S. G. (2007). Avaliação de processo de um programa de manejo de estresse ocupacional. *Psicologia: Reflexão e Crítica*, 20(2), 296-302. <https://doi.org/10.1590/S0102-79722007000200016>
- Paternostro, J., Sullivan, P. J., Behar, S. M., Berlyant M. J., & Friedberg, R. D. (2015). Terapia cognitivo-comportamental em grupos em escolas. In Neufeld, C. B. (Ed.), *Terapia cognitivo-comportamental em grupo para crianças e adolescentes* (pp. 72-87). Artmed.
- Pérez, D., Van der Stuyft, P., del Carmen Zabala, M., Castro, M., & Lefèvre, P. (2015). A modified theoretical framework to assess implementation fidelity of adaptive public health interventions. *Implementation Science*, 11(1), e91. <https://doi.org/10.1186/s13012-016-0457-8>
- Santos, R. G. H., & Celeri, E. H. R. V. (2018). Rastreamento de problemas de saúde mental em crianças pré-escolares no contexto da atenção básica à saúde. *Revista Paulista de Pediatria*, 36(1), 82-90. <https://doi.org/10.1590/1984-0462/2018;36;1;00009>
- Skinner, B. F. (1975). The shaping of phylogenetic behavior. *Journal of the Experimental Analysis of Behavior*, 24(1), 117-120. <https://doi.org/10.1901/jeab.1975.24-117>
- Smith, E., Koerting, J., Latter, S., Knowles, M. M., McCann, D. C., Thompson, M., & Sonuga-Barke, E. J. (2015). Overcoming barriers to effective early parenting interventions for attention-deficit hyperactivity disorder (ADHD): parent and practitioner views. *Child: Care, Health and Development*, 41(1), 93-102. <https://doi.org/10.1111/cch.12146>
- Taylor, R. D., Oberle, E., Durlak, J. A., & Weissberg, R. P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: a meta-analysis of follow-up effects. *Child Development*, 88(4), 1156-1171. <https://doi.org/10.1111/cdev.12864>
- Vernon-Feagans, L., Mokra, I. L., Carr, R. C., Garrett-Peters, P. T., Burchinal, M. R., & Family Life Project Key Investigators. (2019). Cumulative years of classroom quality from kindergarten to third grade: prediction to children's third grade literacy skills. *Early Childhood Research Quarterly*, 47, 531-540. <https://doi.org/10.1016/j.ecresq.2018.06.005>

- Wenzel, A. (2020). Reavaliação cognitiva. In S. Heyes & S. Hoffman (Eds.), *Terapia cognitivo-comportamental baseada em processos* (pp. 361-375). Artmed.
- Wigelsworth, M., Lendrum, A., Oldfield, J., Scott, A., ten Bokkel, I., Tate, K., & Emery, C. (2016). The impact of trial stage, developer involvement and international transferability on universal social and emotional learning programme outcomes: a meta-analysis. *Cambridge Journal of Education*, 46(3), 347-376. <https://doi.org/10.1080/0305764X.2016.1195791>

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D. C. FAVA was responsible for the study conception and design, analysis and interpretation of data, as well as reviewing and approving the final version of the article. A. H. MARIN was the supervisor of this study and responsible for its conception and design, analysis and interpretation of data, as well as reviewing and approving the final version of the article. I. ANDRETTA was the supervisor of this study and responsible for reviewing and approving the final version of the article.