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Effectiveness of the ACT program on coparenting and reducing children's behavioral problems

Eficácia do Programa ACT na coparentalidade e redução de problemas comportamentais de crianças

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Abstract

Objective
This study aimed to verify the impacts of the ACT Program on coparenting, child behavior problems, and the child's prosocial behaviors in hetero affective two-parent families.

Method
A randomized-controlled study was conducted with 50 parents (48 women and two men) of children aged between two and eight years old. Data were analyzed using simple structural equation modeling.

Results
There was a direct positive impact of the Program on coparenting and the reduction of children's behavioral problems. No significant impacts were observed on prosocial behaviors.

Conclusion
These results suggest a dynamic and interrelational understanding between the parental, marital, and coparental systems, thereby increasing the visibility of the ACT Program as a mechanism for protecting child development.

Keywords: Child behavior; Family relations; Parental educational practices; Training programs.

Resumo

Objetivo
O objetivo deste estudo foi verificar os impactos do Programa ACT na coparentalidade, nos problemas de comportamento infantil e nos comportamentos pró-sociais da criança, em famílias biparentais heteroafetivas.

Método

Um estudo randomizado-controlado foi conduzido com 50 pais (48 mulheres e dois homens) de crianças com idades entre dois e oito anos. Os dados foram analisados por meio de modelagem de equação estrutural simples.

Resultados

Verificou-se impacto positivo direto do Programa na coparentalidade e na redução de problemas comportamentais das crianças. Não foram observados impactos significativos nos comportamentos pró-sociais.

Conclusão

Esses resultados apontam para uma compreensão dinâmica e interrelacional entre os sistemas parental, conjugal e coparental, e ampliam a visibilidade do Programa ACT como um mecanismo de proteção ao desenvolvimento infantil.

Palavras-chave: *Comportamento infantil; Relações familiares; Práticas educativas parentais; Programas de treinamento.*

The family environment is the most important reference point for development in the early years of life, as it directly impacts children's habits, care, education, and socialization (Gulliford et al., 2015). Child development, as understood by the Bioecological Theory of Human Development (Bronfenbrenner, 1996), is a process resulting from the reciprocal interrelationship between the biological and behavioral aspects of the child and the context in which they are embedded. This theory examines the interrelationship between systems and subsystems that must be considered when analyzing child development, including personal characteristics, proximal processes, context, and time.

Studies on child behavior usually cover two complementary aspects: prosocial behaviors and behavioral problems. Prosocial behaviors refer to the ability to display attitudes of solidarity and generosity, focusing on doing good for others (Knafo-Noam, 2015). This construct is multidimensional, encompassing emotional, cognitive, and attitudinal elements (Eisenberg et al., 2006). It represents behaviors that favor the child's adjustment, promoting higher levels of self-confidence, empathy, emotional regulation, problem-solving skills, moral reasoning, and academic performance. These behaviors tend to be observed more prominently throughout a child's development as they become increasingly involved in various social contexts (Carlo, 2014; Knafo-Noam, 2015; Malti et al., 2013).

Behavioral problems in childhood, on the other hand, are defined as behavioral deficits or excesses that hinder learning and impair the developmental process (Souza, 2018). They can be categorized as externalizing: evident in interpersonal relationships, with symptoms of physical and verbal aggression, hyperactivity, conduct problems, opposition, and defiance; or internalizing: directed toward the child themselves, involving emotional symptoms such as anxiety, depression, and isolation (Böing & Crepaldi, 2016).

The family is the privileged microcontext for the occurrence of proximal processes, that is, face-to-face interactions. Among the main family subsystems related to behavioral problems and prosocial behaviors are co-parenting and parental conjugality. There is extensive literature exploring the positive associations between coparental and marital relationships, as well as their impact on offspring development (Böing & Crepaldi, 2016; Lamela, Nunes-Costa, et al., 2010). However, co-parenting seems to have greater predictive power regarding aspects of child behavior than marital quality (Lamela, Nunes-Costa, et al., 2010; Mendez et al., 2015; Mosmann et al., 2018), as it encompasses individual, family, and contextual elements, acting as a mediator and/or moderator between child development and marital relationships (Feinberg, Jones, et al., 2010). Children whose parents have positive co-parenting relationships tend to show lower rates of behavioral problems and higher levels of prosocial behavior (Christopher et al., 2015; Scrimgeour et al., 2013). Study

results have also shown associations between the variables of co-parenting and parental educational practices, as well as between these and child behavior (Mosmann et al., 2018).

Interactions between parental, co-parental, and marital subsystems can serve as protective mechanisms for children, fostering the development of social skills. On the other hand, they can also identify risk factors that increase the likelihood of behavioral difficulties in childhood (Altafim et al., 2016). One of the strategies recommended by the World Health Organization for promoting child protection mechanisms is the participation of parents in parenting training programs. These interventions typically focus on enhancing parental educational practices, fostering healthier family relationships, and promoting care, safety, and stability for the child (Altafim et al., 2016).

Among the few evidence-based parenting training programs, the ACT-RSK – Raising Safe Kids Program, which is the focus of this study, is a universal training program for parents and caregivers of children aged between zero and eight years (Howe et al., 2017). The program was developed in 2001 by the Violence Prevention Division of the American Psychological Association (American Psychological Association, 2020). The acronym ACT stands for action, due to the dynamic nature of the intervention, which includes guidance, activities, and group discussions (Silva, 2011). The ACT Program is based on Bandura's Social Learning Theory (Bandura, 1977), which conceives child learning as a process arising from the social context, through observation, imitation of models, and direct experience. In this sense, the intervention aims to influence parental behavior, thereby improving parenting.

Research findings have indicated a reduction in childhood behavioral problems as a result of parental participation in ACT (Altafim et al., 2016; Burkhart et al., 2013; Knox & Burkhart, 2014). Despite the lack of research on the effects of the ACT Program on co-parenting to date, there are indications that co-parenting tends to improve through fathers' participation in training programs focused on co-parenting. Longitudinal studies focusing on Family Foundations (FF) (Feinberg & Kan, 2008) have shown an increase in co-parental support (Feinberg, Jones, et al., 2010; Solmeyer et al., 2013). Studies involving *Pais por Inteiro* (PApi) (Lamela, Castro, et al., 2009), which focus on divorced couples, have demonstrated the promotion of positive co-parenting that aligns with the developmental needs of children.

It should also be noted that the research already conducted on the ACT Program did not evaluate possible mediating effects of other variables on child behavior. In this sense, the mediating role of co-parenting can be analyzed as a general prevention strategy in intervention contexts, due to its protective nature concerning child development (Solmeyer et al., 2013).

When considering the importance of co-parenting for children's psychological health, exploring this phenomenon in the context of the ACT Program tends to increase both the visibility of the intervention's effectiveness and its scope in terms of children's behavior. Based on this premise, the objective of this study was to verify the effectiveness of the ACT Program in improving co-parenting among parents, reducing child-behavior problems, and increasing prosocial behaviors in children in two-parent families. The following hypothesis was formulated: participation in the ACT Program will have a positive effect on co-parenting and, consequently, will have a negative effect on the child's behavioral problems and a positive effect on the child's prosocial behaviors.

Method

Research Characterization

This research is a randomized controlled study with a waiting list control group, using a quantitative approach and experimental design. This is an excerpt from a doctoral thesis, which is

part of a project called "ACT – Parental training program for parents of children aged zero to eight years old".

Participants

The ACT Program was implemented in a city in southern Brazil in 2019. Five groups were formed at three charitable institutions, schools, and the psychological counseling service of the researcher's educational institution, all free of charge. A total of 98 people started the ACT Program, with 58 completing it (33 in the intervention group and 25 in the control group). In order to meet the objectives of this study, the following inclusion criteria were applied: 1) Biological or adoptive parents, married or in a stable relationship for at least six months; 2) with at least one child aged between two and eight years old, with typical development; and 3) with minimum participation in six sessions of the Program, in addition to the preliminary meeting. The final sample consisted of 50 parents, 48 women and two men, divided equally between the control group (25 people) and the intervention group (25 people).

The average age of participating parents was 36.18 (*SD* = 5.33). The average age of the children was 4.16 (*SD* = 2.14). Half of the participants had only one child (50% of the sample consisted of the family configuration: two parents and one child), another 18 participants had two children (36% of the sample), and the remainder of the sample (14%) represented families with more than two children and/or other family configurations (relatives living in the home in addition to the parents and children). The children had a mean age of 4.16 (*SD* = 2.14). About the sex of the children, there was a prevalence of male children: 34 boys (68%) and 16 girls (32%).

Instruments

• *Sociodemographic Questionnaire*: a tool developed specifically for this study, based on the ACT Program Manual (Silva, 2011). It included personal data about the parents, the target child (son or daughter), and other family members.

• *Strengths & Difficulties Questionnaires* (SDQ) validated for the Brazilian population by Fleitlich et al. (2000): consisting of a three-point *Likert scale* ranging from false (0) to *true* (2) for the child's behavior over the past six months. It contains 25 items and five dimensions, four of which are related to child behavior problems (emotional symptoms, conduct problems, hyperactivity, and difficulties in relationships with peers). The fifth dimension reflects the child's capacity for prosocial behavior. In this study, the internal consistency index (Cronbach's alpha) for the scale of childhood behavior problems was 0.81 and 0.77 for prosocial behavior.

• *Coparenting Relationship Scale* (CRS) (Feinberg, Brown, et al., 2012); cross-cultural adaptation for Brazil by Carvalho et al. (2018). The instrument has a seven-point scale ranging from "not true" (0) to "*completely true*" (6), with the exception of the "conflict" dimension, where responses range from "*never*" (0) to "*very often*" (6). It comprises 35 items, divided into seven dimensions: 1. Co-parenting agreement; 2. Division of labor; 3. Co-parental support; 4. Support for your partner's parenting; 5. Co-parental sabotage; 6. Exposure to conflict; and, 7. Co-parenting proximity. In this study, the internal consistency index for total CRS was 0.89.

• *Marital Relationship Questionnaire* (MRQ): self-report questionnaire developed by a group of researchers from the educational institution linked to the research. It consists of three items, rated on a five-point scale, and measures three dimensions of marital relationship: marital relationship quality, marital conflict, and marital satisfaction. Regarding the quality of marital relationships, the

scale ranges from "very unhappy" (1) and "*very happy*" (5); marital conflict is rated from "*no conflict*" (1) to "*extremely conflictual*" (5); and marital satisfaction is rated on a scale ranging from "*not at all satisfied*" (1) to "*extremely satisfied*" (5). The MRQ demonstrated adequate internal consistency indices in the present study (α = 0.88).

Procedures: Data Collection

The ACT Program intervention groups were led and data were collected by three psychologists who were trained and certified as ACT facilitators, with the assistance of undergraduate psychology students. For each group, data collection regarding the first application of materials and instruments (pre-assessment) was carried out at the end of the preliminary meeting, with all participants present. Sample randomization was also performed at the preliminary meeting, dividing each of the large groups into two (Control Groups – CG and Intervention Groups – IG) by drawing lots.

According to the instructions in the manual developed by Silva (2011), each group consisted of between six and twelve parents and/or caregivers, and the interactive weekly meetings, lasting two hours each, combined content presentation, reflections, discussions, and group dynamics, and were held in the following sequence: 1. Preliminary meeting of the Program; 2. Understanding child behavior and development; 3. Violence in children's lives; 4. Management of rabies in adults; 5. How to help children regulate their emotions, including anger management; 6. The influence of electronic media on children's behavior; 7. Parenting styles and discipline; 8. Discipline focused on positive behaviors; and 9. The role of parents in promoting safe environments for children.

Participants in the Intervention Groups (IGs) followed the program immediately (participating in session one the following week). They underwent a reapplication of the same instruments and materials at the last program meeting (post-intervention). The control group remained on the waiting list, starting after the conclusion of the GI (with an average period of two months following the preliminary meeting and pre-assessment). For the GCs, the instruments were also reapplied at the last meeting (post-intervention). Due to the specific objectives of this study, only data from the first and second assessments of both groups were considered for further analysis.

Data Analysis

The sample for this study consisted only of participants who responded to both assessments (pre-intervention and post-intervention), allowing the results to be analyzed according to the protocol (*Per-Protocol* – PP). A simple structural equation modeling was performed using path analysis or trajectory analysis of the created model to test the research hypotheses.

The effectiveness of the ACT Program on co-parenting and child behavior was analyzed using path analysis (with the overall scores of the instruments as observed variables) for panel data (repeated longitudinal measures). The model consisted of a *cross-lagged* structure between the pre- and post-intervention moments, with participation in the ACT Program or the control group serving as an exogenous variable affecting the outcomes (co-parenting, child behavior problems, and child prosocial behaviors) in the second moment. Additionally, the variables of marital relationship quality and length of marriage were included as control variables in the study.

The procedural steps for data preparation, defining the structural model, estimation, testing, and redefinition of the model, as proposed by Kline (2016), were followed. The data from the instruments were tabulated using the IBM®SPSS® (version 22) and analyzed using statistical *software* packages. The validity of the proposed model was tested using structural

equation modeling techniques, aided by the Lavaan program (Rosseel, 2012). The model parameters were estimated using the maximum likelihood technique with a robust correction for non-normality by Satorra-Bentler (Kline, 2016). The comparative indices used to assess the adequacy of the tested model were robust χ^2, Robust Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA) and Standardized Root Mean Square Residual (SRMR).

The model was redefined by the modification indices, residues, and estimates of the parameters themselves. Parameter estimates were based on data with standardized numerical variables, while maintaining categorical and dichotomous variables, such as participation in the intervention group or control group, in their original scale to facilitate the interpretation of the intervention's impact.

Ethical Considerations

This study was duly approved by the Ethics Committee of the educational institution to which the authors are affiliated, under opinion number 2.766.095, and by the ethical parameters on Research with Human Beings in the Human and Social Sciences, of Resolution CNS 510/16 (Conselho Nacional de Saúde, 2016). Parental participation was voluntary, backed by a guarantee of anonymity and the signing of a Free and Informed Consent Form. The participating entities gave their consent by signing a declaration.

Results

The results referring to correlations, means, and standard deviations of the variables that composed the model tested in the study are presented in Table 1 (Correlations, means, and standard deviations of the variables that composed the final model of the study). Figure 1 (Final model with estimates in arrows) and Table 2 (Maximum likelihood estimates for the model of the effect of parental participation in the ACT Program on co-parenting and child behavior problems and child prosocial behavior) contain the main results of the model of the effect of parental participation in the ACT Program on co-parenting, child behavior problems, and child prosocial behavior. The results showed a good model fit [*S-B* χ^2 = 14129 (12), p = 0.293; Robust CFI = 0.984; Robust RMSEA = 0.058; SRMR = 0.082] (Table 1).

Table 1

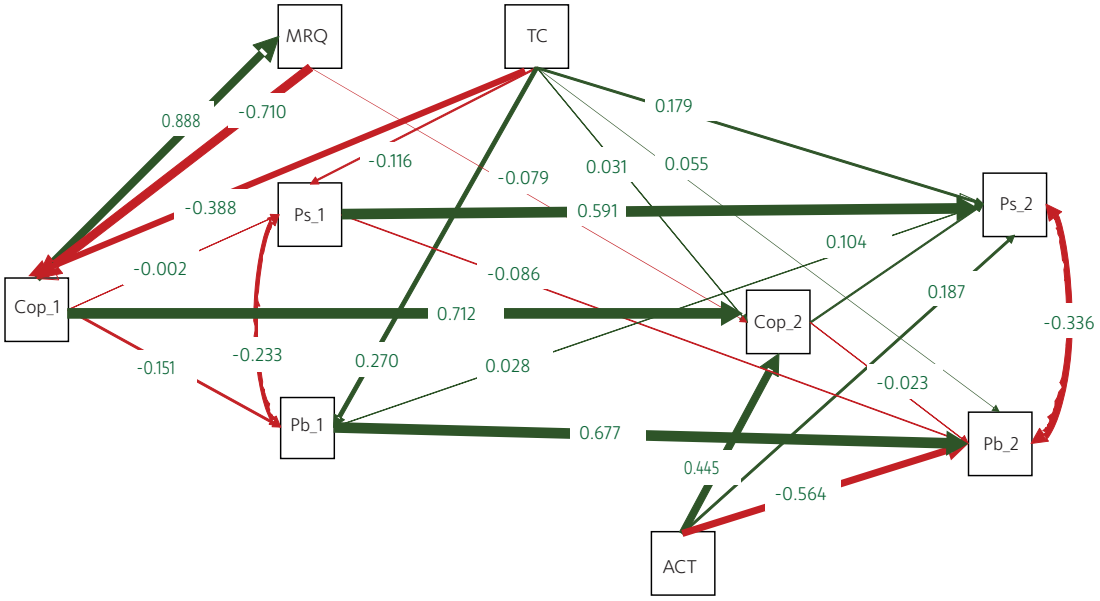
Correlations, means, and standard deviations of the variables that comprised the final model of the study

Variables	1	2	3	4	5	6	7	8	9
1. ACT	1								
2. TC	-0.040	1							
3. CRS_Av1	0.257	-0.120	1						
4. CRS_Av2	**0.411****	-0.070	**0.730****	1					
5. MRQ_Av1	-0.050	-0.106	**0.482****	0.251	1				
6. CCP_Av1	0.256	-0.058	0.005	0.159	-0.135	1			
7. CPC_Av1	-0.184	0.154	-0.167	-0.192	-0.046	-0.236	1		
8. CCP_Av2	**0.280***	0.049	0.053	0.225	0.036	**0.620****	-0.135	1	
9. CPC_Av2	**-0.442****	0.150	-0.199	**-0.286***	-0.035	**-0.323***	**0.758****	**-0.374****	1
Average	0.50	1.54	4.72	4.93	3.86	1.47	0.61	1.59	0.56
Standard deviation	0.50	0.50	0.75	0.75	0.76	0.37	0.31	0.41	0.35

Note: *p<0.05; **p<0.01. ACT: Participation in the ACT Program; CCP_Av1: Assessment of the child's prosocial behavior at time 1; CCP_av2: Assessment of the child's prosocial behavior at time 2; CPC_Av1: Assessment of the child's behavioral problems at time 1; CPC_Av2: Assessment of the child's behavioral problems at time 2; CRS_Av1: Assessment of parental co-parenting at time 1; CRS_Av2: Assessment of parental co-parenting at time 2; MRQ_Av1: Assessment of marital relationship at time 1; TC: Length of union (length of marriage or stable union).

Figure 1

Final model with estimated values indicated by arrows



Note: ACT: having participated in the ACT Program or being in the control group; Cop_1: Pre-intervention co-parenting; Cop_2: Post-intervention co-parenting; MRQ: Pre-intervention quality of marital relationship; Pb_1: Pre-intervention behavioral problems of the child; Pb_2: Post-intervention behavioral problems of the child; Ps_1: Pre-intervention prosocial behavior of the child; Ps_2: Post-intervention prosocial behavior of the child; TC: Pre-intervention length of marital union.

Post-intervention co-parenting was explained by 55.5% of the variance in the pre-intervention assessment ($B = 0.712$; $SE = 0.082$; $p < 0.005$, by parental participation in the ACT Program ($B = 0.445$; $SE = 0.149$; $p = 0.003$), these two relationships being statistically significant, in addition to the length of marital union and the quality of the marital relationship assessed at the first moment (Table 2). Regarding the child's prosocial behaviors assessed post-intervention, the only statistically significant effect associated with it was the positive contribution of the pre-intervention assessment of the child's prosocial behaviors ($B = 0.591$; $SE = 0.129$; $p < 0.000$), with 38.5% of the variance explained in the model.

Table 2

Maximum likelihood estimates for the model of the effect of parental participation in the ACT Program on co-parenting and child behavior problems and child prosocial behavior

1 of 2

Variables		R^2	$B(SE)$
Predictor	Outcome		
Cop_1 →	Pb_1	-	-0.151(0.163)
TC →			0.181(0.151)
Cop_1 →	Ps_1	-	-0.002(0.230)
TC →			-0.116(0.462)
MRQ →	Cop_1	-	-0.710(0.944)
TC →			-0.388(0.560)
Cop_1 →	MRQ	-	0.888(0.944)
MRQ →	Cop_2	0.555	-0.079(0.107)
TC →			0.031(0.153)
ACT →			0.445(0.149)
Cop 1 →			0.712(0.082)

Table 2

Maximum likelihood estimates for the model of the effect of parental participation in the ACT Program on co-parenting and child behavior problems and child prosocial behavior

Variables		R^2	*B*(*SE*)
Predictor	Outcome		
Cop_2 →			-0.023(0.094)
TC →			0.055(0.178)
ACT →	Pb_2	0.646	-0.564(0.122)
Pb_1 →			0.677(0.102)
Ps_1 →			-0.086(0.134)
Cop_2 →			0.104(0.084)
TC →			0.179(0.232)
ACT →	Ps_2	0.385	0.187(0.160)
Ps_1 →			0.591(0.129)
Pb_1 →			0.028(0.156)
ACT → Cop_2 → Pb_2		-	-0.010(0.040)
ACT → Cop_2 → Ps_2		-	0.046(0.029)
ACT→ Pb_2 (Total)		-	-0.574(0.124)
ACT→ Ps_2 (Total)			0.233(0.152)

Note: R^2: Sum of the adjusted regression coefficient; B: Unstandardized regression coefficient; SE: Standard error of the unstandardized regression coefficient. ACT: having participated in the ACT Program or being in the control group; Cop_1: Pre-intervention coparentality; Cop_2: post-intervention co-parenting; MRQ: Pre-intervention quality of marital relationship; Pb_1: Pre-intervention behavioral problems of the child; Pb_2: post-intervention child behavior problems; Ps_1: Pre-intervention prosocial behavior of the child; Ps_2: post-intervention child prosocial behavior; TC: Pre-intervention length of marital union.

Behavioral problems in children after assessment were explained by parental participation in the ACT Program in 64.6% of cases (*B* = -0.564; *EP* = 0.122; *p & lt*; 0.005), by co-parenting assessed at the second moment and by the child's behavioral problems (*B* = 0.677; *EP* = 0.102; *p&lt*; 0.005), by prosocial behaviors and by marital union duration assessed at the first moment. Participation in the ACT Program had a statistically significant negative effect on the child's behavioral problems (*B* = -0.574; *SE* = 0.124; $p < 0.005$), considering the direct effect of the intervention on the child's behavioral problems (*B* = -0.564; *SE* = 0.122; $p < 0.005$) and the effect mediated by the intervention on co-parenting (*B* = -0.010; *SE* = 0.040; $p = 0.802$).

Discussion

When considering the hypothesis of this study, the analysis of the results shows that parental participation in the ACT Program had a direct and positive impact on both co-parenting and the reduction of behavioral problems in children. However, this hypothesis was partially accepted due to the insignificant positive effect of participation in the ACT Program on children's prosocial behaviors, as well as the absence of a statistically significant relationship between parental participation in the Program and children's prosocial behaviors.

The direct positive effect of the ACT Program on co-parenting has been confirmed and can be explained in two complementary ways. First, several studies indicate a positive association between co-parenting and parental educational practices (Böing & Crepaldi, 2016; Feinberg & Kan, 2008; Mosmann et al., 2018). Given the effectiveness of ACT in improving parents' educational practices (Altafim et al., 2016; Knox & Burkhart, 2014; Weymouth & Howe, 2011), it is assumed that participants shared what they learned from the Program meetings with their partners. Thus, it can be deduced that the appropriation of techniques, strategies, and general knowledge acquired had an impact on the co-parenting couple, generating a higher level of agreement, support, and

improvement in the joint management of the child's care and education. Furthermore, authors Feinberg and Kan (2008) demonstrated that parental interventions are effective strategies for improving co-parenting, which also seems to be consistent with the ACT Program.

It should be noted that, although the influence of the ACT Program on co-parenting has not yet been evaluated by other scientific studies, parental interventions provide parents with resources and strategies for emotional regulation, conflict management, and problem solving (Mejia et al., 2016). Therefore, the results of this study indicate that although the ACT Program does not specifically address the co-parenting relationship, the impacts on co-parenting are favorable and can be understood systemically, given the interdependence and dynamism between the parental, marital, and co-parenting systems, even when both parents do not participate in the intervention (Mosmann et al., 2018).

With regard to the impact of the ACT Program and/or co-parenting on children's behavioral problems, the results showed indications of a direct reduction in children's behavioral problems after parents participated in the Program and a total reduction when considering the direct effect of ACT combined with the effect mediated by co-parenting. However, the presumed mediating effect of co-parenting on reducing behavioral problems, when considered exclusively, was not significant.

The finding of the direct negative effect of the ACT Program on children's behavioral problems was consistent with the findings of previous studies (Altafim et al., 2016; Burkhart et al., 2013; Knox & Burkhart, 2014). This effect is likely due to parents learning positive discipline content and strategies (Silva, 2011). The positive discipline techniques addressed during the intervention involve the importance of parents helping children resolve conflicts and identify and express emotions, positively reinforcing behaviors considered appropriate, and understanding that parents' behavior serves as an example for children (Altafim et al., 2016; Mejia et al., 2016).

It is also assumed that increased understanding among parents about child development at different ages has enabled them to recognize normal behavior in their children, reducing expectations and encouraging more effective ways of dealing with difficult situations. Therefore, it can be inferred that changes in parental behavior were reflected in positive transformations in the child's microsystem (Bronfenbrenner, 1996) and served as a model of interaction for the children, who, in turn, reduced behaviors considered inappropriate, based on observation and direct experience (Bandura, 1977).

The absence of a mediating effect of co-parenting on child behavior problems observed in this study is consistent with previous research linking positive co-parenting to reduced behavioral problems (Lamela, Nunes-Costa, et al., 2010; Mendez et al., 2015; Mosmann et al., 2018). In this sense, it is essential to consider that the Coparental Relationship Scale (Feinberg, Brown, et al., 2012) is designed for respondents to assess their partner's coparenting. Thus, the findings of this study demonstrate the perception of improvement in the co-parenting relationship of the non-participating member of the couple by the person who participated in the Program. It is hypothesized that much of the reduction in children's behavioral problems was more strongly related to the acquisition of positive educational practices than to improvements in co-parenting.

With regard to the impact of ACT and/or co-parenting on children's prosocial behaviors, the insignificant results point to the absence of a relationship between the variables in the sample surveyed. The findings of this study did not confirm the results of a review conducted in Brazil (Altafim et al., 2016), which indicated that children's prosocial behaviors tend to increase with parental participation in the ACT Program. It can be inferred that the explanation for the insignificant positive effect of ACT on prosocial behaviors is more closely linked to a characteristic of the sample,

specifically the low average age of the children, which was around four years old. Although children already show some inclination toward prosocial actions from the age of two (Knafo-Noam, 2015), the expansion of social competence tends to occur with advancing age (Malti et al., 2013).

The factors that determine the presentation of prosocial behaviors are not yet agreed upon (Eisenberg et al., 2006), but there are indications that social competence is related both to the development of psychosocial skills throughout development and to the child's insertion into diverse social contexts (Knafo-Noam, 2015). As children develop, empathy, the need for social acceptance (Malti et al., 2013), moral reasoning, and sense of identity are expected to increase (Carlo, 2014). Around the age of four, there is a greater tendency to begin acquiring the ability to distinguish one's own actions from those of other people, which tends to intensify prosocial behaviors (Carlo, 2014; Souza, 2018). Furthermore, when children enter the school environment, there is commonly a tendency toward increased social competence, given the expansion of opportunities for interaction (Eisenberg et al., 2006; Malti et al., 2013).

Another possible interpretation is associated with the complexity of the prosocial behavior construct, considered a multidimensional skill that encompasses a repertoire of emotions, cognitions, and attitudes. The demonstration of prosocial behaviors is not easily identified during childhood, as it requires careful analysis on the part of the child in terms of their perception of other people's needs and emotional reactions, as well as decision-making and problem-solving skills (Eisenberg et al., 2006). The results found by Mejia et al. (2016), based on a sample of children with an average age of six, seem to be consistent with this perspective. In this study, parents described a decrease in their children's behavioral problems, as well as an increased ability to follow rules and instructions, after participating in a parenting training program. However, they did not observe any improvement in the child's ability to reflect on his own behavior.

The absence of the mediating and positive effect of co-parenting, which was expected in relation to the child's prosocial behaviors, is at odds with previous studies, which associate positive co-parenting with an increase in prosocial behaviors in children (Christopher et al., 2015; Scrimgeour et al., 2013). An important point to consider is that children's social competence tends to be significantly affected by the microsystems involving interaction with peers, as much or more than by elements of family dynamics, including co-parenting (Eisenberg et al., 2006; Souza, 2018).

The research was a pioneer in exploring co-parenting in the context of the ACT Program, and the results indicate that even when only one parent participates, the co-parenting relationship is positively affected. This result reinforces that ACT is a promising parenting training program as a mechanism for protecting child development, given that it has the potential to positively impact not only parents' educational practices, but also other important variables in family dynamics, such as co-parenting. In this way, not only parenting training programs with a specific focus on co-parenting, such as Family Foundations (FF) (Feinberg & Kan, 2008) and PApi (Lamela, Castro, et al., 2009), can positively intervene in improving co-parenting relationships.

The study shows that the ACT Program is effective in reducing behavioral problems in children, as already demonstrated in the literature. Regarding the limited effect on prosocial behaviors, the findings presented raise relevant questions. First, it can be assumed that prosocial behaviors during childhood are more effectively improved through the direct participation of children in social skills training with peers of the same age group. However, it is also essential to consider that the absence of impact on prosocial behaviors may be related to the need to include other variables in the statistical model. Longitudinal studies, with follow-up to monitor the impact

of the intervention on pro-social behaviors in the medium and long term, may contribute to more conclusive results, given the complexity of this construct.

With regard to the expected mediating effect of co-parenting through parental participation in the intervention, which had little impact on reducing behavioral problems in children and no effect on increasing prosocial behaviors, it is considered that these results should not be treated as conclusive, precisely because of the plurality of phenomena and family subsystems that act systemically in child development. Thus, new studies face the challenge of testing other methods of data analysis. To this end, it is important to mention the need for greater paternal involvement in the ACT Program. The information obtained, whether through mixed groups or groups consisting only of men, would provide relevant information for understanding the differences, similarities, and levels of influence of fatherhood on the repercussions of the intervention.

The limitations of this study include the inability to include other sociodemographic data that could provide diverse perspectives, such as the gender and age of parents/children and educational/financial information about families. It should also be noted that the data analyzed were obtained exclusively from the parents' reports, using the instruments and materials applied. It is understood that the use of multiple informants, such as teachers or other family members, would make the results regarding changes in the child's behavior more robust. In the specific case of co-parenting, the response of the non-participating father would also contribute to improving understanding of the effect of this variable in the context of ACT in relation to children's behavior.

One of the main differentiators of this study is the quality of the methodology employed, given that path analysis allows for the interrelation of several variables in a dynamic and multidirectional manner, in addition to generating data reliability. Furthermore, this method is consistent with the systemic perspective, which facilitates understanding of the interdependence between the various factors that favor or hinder child development. In this sense, systemic analysis also seems to be quite favorable for interpreting the possible transformations in parental participation in training programs such as ACT, providing support for its implementation in different contexts, including as a public mental health policy during childhood.

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