ISSN online 1688-4221 *Ciencias Psicológicas* July-December 2022; 16(2), e-2370
doi: 10.22235/cp.v16i2.2370

Family relations, dysfunctional cognitions, and child emotional and behavioral problems

Relações familiares, cognições disfuncionais e problemas emocionais e comportamentais dos filhos

Relaciones familiares, cogniciones disfuncionales y problemas emocionales y de comportamiento de los niños

Ana Cláudia Dutra Cipriano Lara[1], ORCID 0000-0002-8145-4543
Mariana Verdolin Guilherme Froeseler[2], ORCID 0000-0002-2211-5269
Priscilla Moreira Ohno[3], ORCID 0000-0003-0377-555X
Maycoln Leôni Martins Teodoro[4], ORCID 0000-0002-3021-8567

[1]*Universidade Federal de Minas Gerais, Brazil*
[2]*Universidade Federal de Minas Gerais, Brazil*
[3]*Universidade Federal de Minas Gerais, Brazil*
[4]*Universidade Federal de Minas Gerais, Brazil*

Abstract

Family relationships are extremely important for human development and may act as either protective or risk factors for the emergence of dysfunctional cognitions and emotional and behavioral problems (EBP). This study aimed to investigate the relationships between perception of family conflict and affectivity, dysfunctional cognitions, and the EBP of 371 adolescents aged 11 to 16 years, as well as the mediating role played by dysfunctional cognitions in the relationship between family perception and EBP. Data were collected at the participants' schools using self-report instruments. Analyses of correlation, between-group comparison, and regression were conducted. The perception of family conflict had an indirect and significant effect on most of the EBP, with dysfunctional cognitions presenting a partial mediation role. Family affectivity had a less significant effect on the EBP and was totally mediated by cognition.

Keywords*:* family relations; family conflict; cognition; affective symptoms; problematic behavior

Resumo

As relações familiares são de extrema importância no desenvolvimento humano, podendo atuar como fatores de proteção ou de risco para o surgimento de cognições disfuncionais e de problemas emocionais e comportamentais (PEC). O objetivo do presente estudo foi investigar as relações entre a percepção de conflito e de afetividade familiares, as cognições disfuncionais e os PEC de 371 adolescentes de 11 a 16 anos, além do papel mediador das cognições na relação entre a percepção de família e os PEC. Os dados foram coletados nas escolas dos participantes, por meio de instrumentos de autorrelato. Foram conduzidas análises de correlação, de comparação entre grupos e de regressão. A percepção de conflito familiar apresentou efeito indireto e significativo sobre a maioria dos PEC, tendo as cognições disfuncionais papel de mediação parcial. A afetividade familiar apresentou efeito menos significativo e totalmente mediado pelas cognições.

Palavras-chave: relações familiares; conflito familiar; cognição; sintomas afetivos; comportamento problema

Resumen

Las relaciones familiares son extremadamente importantes en el desarrollo humano y pueden actuar como factores protectores o de riesgo para la emergencia de cogniciones disfuncionales y problemas emocionales y de comportamiento (PEC). El objetivo del presente estudio fue investigar las relaciones entre las percepciones del conflicto y de la afectividad familiares sobre las cogniciones disfuncionales y los PEC de 371 adolescentes de 11 a 16 años, así como el papel mediador de las cogniciones disfuncionales en la relación entre la percepción familiar y los PEC. Los datos se recolectaron en las escuelas de los participantes, utilizando instrumentos de autoinforme. Se realizaron análisis de correlación, de comparación entre grupos y de regresión. La percepción sobre el conflicto familiar tuvo un efecto indirecto y significativo en la mayoría de los PEC, teniendo las cogniciones disfuncionales el papel de mediación parcial. La afectividad familiar tuvo un efecto menos significativo y totalmente mediado por las cogniciones.

Palabras clave: relaciones familiares; conflicto familiar; cognición; síntomas afectivos; problema de comportamiento

Received: 12/09/2020 Accepted: 05/25/2022

Correspondence: Ana Cláudia Dutra Cipriano Lara, Universidade Federal de Minas Gerais, Brazil. E-mail: acdcipriano@gmail.com

The family is the first and most important institution in which an individual participates. Based on the good quality of the relationship between parents and children, siblings learn strategies to interact with each other, which, in turn, will positively influence their future relationships and behaviors (Amici et al., 2022; Wang, 2022). In contrast, a low quality of family interactions can contribute to the developing of emotional and behavioral problems in children (Amici et al., 2022; Faltýnková et al., 2020).

Some family characteristics are linked to variations in mood symptoms. For example, Teodoro et al. (2010), in a study conducted with 234 students aged 8-14 years, pointed out that high levels of conflict and low levels of affectivity in the family are associated with depression in children. Conflict was defined as negative feelings that generate stress and/or aggression in the family. Affectivity, on the other hand, was characterized as a range of positive emotions present in interpersonal relationships. Given these dimensions, four groups of families can be considered: high affectivity and low conflict (type I); high affectivity and conflict (type II); low affectivity and conflict (type III); low affectivity and high conflict (type IV).

Some studies addressing the dimensions of family conflict and/or affectivity have been carried out (Hess et al., 2013; McCauley et al., 2019; Weymouth et al., 2019). McCauley et al. (2019) followed up 768 6th and 7th-grade students and their families, founding a

negative effect of interparental conflict on adolescent threat appraisals. In a study conducted with 139 adolescents aged 11 to 16 years and their parents, Hess et al. (2013) found positive correlations between perception of family conflict and manifestation of internalizing symptoms of adolescents after a year.

Emotional and behavioral problems (EBP) were characterized by Achenbach (1991) as symptomatic patterns that can be divided into two groups: internalizing and externalizing. The first are associated with a disorder in behavior self-regulation, while the latter are related to an emotional or mood disorder (Kovacs & Devlin, 1998). Some examples of internalizing symptoms are anxiety/depression, emotional reactivity, and somatic complaints. Externalizing symptoms include, among others, aggressive and rule-breaking behaviors (Achenbach et al., 2017).

In general, studies investigating EBP in children and adolescents point to a difference between sex and age at which problems begin to appear (Rocha, 2012). Girls tend to present more internalizing problems compared with boys, who manifest more externalizing problems (Rescorla et al., 2007; Rocha, 2012). In addition, older adolescents tend to have more EBP than younger ones (Booth et al., 2019; Rocha, 2012).

In childhood and adolescence, EBP can be treated through Cognitive-Behavioral Therapy, whose model suggests that all psychological disorders have the presence of dysfunctional cognitions as a common factor. These dysfunctional cognitions are manifested through distorted interpretation of lived events in these individuals. They can be developed from childhood, personal experiences, identification with significant people, and perception of these people's attitudes (Beck, 2013). In this sense, it can be said that the environment facilitates or inhibits the emergence of certain types of cognitions.

Studies developed in other countries have analyzed child cognition and verified the mediation effect of this variable on the relationship between family and the EBP (Shi et al., 2017; Throuvala et al., 2019); however, because they explored specific aspects of cognition and/or EBP, their results are limited. For example, Shi et al. (2017) specifically assessed the internet addiction outcome of 3289 Chinese students aged 10-18 years and found a mediation of loneliness and self-esteem in the effect that family functioning had on this problem.

Regarding research in Brazil, a review study identified articles published between 2008 and 2019 that explored the associations between family and adolescent dysfunctional cognitions (Lara et al., 2021). Of the 13 studies found, seven evaluated the direct relationship between the two variables, and five dealt with the mediating role of cognitions in the relationship between the family and the children's EBP; however, none of these studies were conducted in Brazil.

Therefore, this study aimed to fill national gaps and international limitations by exploring cognitions and EBP more extensively, addressing a broader range of problems, and considering dysfunctional cognitions as a whole, not restricting them to a specific aspect. In addition, family, dysfunctional cognitions and EBP were analyzed simultaneously, since these three aspects are of increasing importance in research in the health area and have been found to be associated.

The main objective of this study was to investigate the relationships between perception of family conflict and affectivity, dysfunctional cognitions, and EBP in adolescents. Here, the term dysfunctional cognitions will comprise the three levels of the Beck's model (2013): dysfunctional thoughts, attitudes and beliefs. The secondary objective was to verify whether dysfunctional cognitions play a mediating role between family relationships and EBP. This study also proposed to investigate whether there are differences between the participants according to sex.

The following hypotheses were tested: 1. Male participants have more externalizing problems, while female participants have more internalizing problems; 2. Adolescents who evaluate their families as type IV (low affectivity/high conflict) present a larger number of negative cognitions and EBP, and differ significantly from adolescents who evaluate their families as type I (high affectivity/low conflict); 3. Perception of family conflict and affectivity are predictors of dysfunctional cognitions and EBP, while dysfunctional cognitions are predictors of EBP; 4. Dysfunctional cognitions partially mediate the relationship between perception of family conflict and affectivity and EBP.

Method

Participants

A total of 371 adolescents enrolled in public (n = 299; 80.6 %) and private schools in Belo Horizonte, southeastern Brazil, and two cities in its metropolitan region participated in the study. The group consisted of 216 females (58.2 %) and 155 males (41.8 %) aged 11-16 years (12.51 ± 1.23).

Instruments

Family relationships

Familiograma (Family Chart - FG) (Teodoro et al., 2010). This self-report instrument aims to assess perceptions of family conflict and affectivity among different dyads. Each dyad is evaluated by 22 adjectives rated on a five-point Likert scale (form *not at all* to *completely*). The score can vary between 11 and 55 points per construct. Higher scores indicate higher perception of conflict and affectivity. The FG classifies families into four types which differ in the combination of affectivity and conflict intensities (see Introduction section). Teodoro et al. (2010) applied the FG to 234 youngsters aged 8-14 years, and found a bifactorial structure using exploratory factor analysis (EFA). Internal consistency indices (Cronbach's α) ranged from .87 to .97 (good to excellent; Zanon & Filho, 2015). In the present study, the participants' perceptions of the child-mother, child-father and mother-father dyads were evaluated and presented excellent indices ($.90 < \alpha > .93$) (Zanon & Filho, 2015).

Emotional and Behavioral Problems (EBP)

Youth Self-Report (YSR; Achenbach & Rescorla, 2001). A self-assessment inventory for 11–18-year-olds that is part of the Empirically Based Assessment System (Achenbach, 1991; Achenbach & Rescorla, 2001). The YSR is divided into two sections: social competence/adaptive functioning (with 20 items answered in a partially open way) and behavior problems (118 items answered on a three-point scale – not true, somewhat or sometimes true, and very true or often true). Item responses provide scores on eight problem scales: Anxious/Depressed, Withdrawn/Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule-Breaking Behavior, and Aggressive Behavior. These scales are grouped into three general indices: Internalization Scale (first three scales), Externalization Scale (last two scales), and Total EBP Scale (comprising all problem items in the inventory). The version of the YSR adapted for Brazil (Bordin et al., 2013; Rocha, 2012) was used in this study. This version has evidence of validity based on the internal structure, via confirmatory factor analysis (CFA), and in the correlations of the scales with each other (Rocha, 2012). The participants' responses were computed on the ADM software using the raw scores in the eight scales in the analyses.

Childhood Depression Inventory (CDI; Kovacs, 1992). The CDI investigates the intensity of affective, cognitive, and behavioral symptoms of depression in young people aged 7-17 years. It has 27 items with three response options (scored as zero, one, or two points). Higher scores indicate greater intensity of symptoms. The CDI can be applied individually or in group, and it is filled by the participants themselves. In the study by Gouveia et al. (1995), the inventory showed a unifactorial structure and an internal consistency of .81. In the present study, the Cronbach's α was .85, considered good (Zanon & Filho, 2015), as well as in the adaptation study.

Dysfunctional cognitions

Cognitive Triad Inventory for Children (CTI-C; Kaslow et al., 1992). This self-report instrument investigates positive and negative views related to the cognitive triad (views of the self, world, and future) of young people aged 9-14 years. Respondents should indicate whether the sentences in each of the 36 items describe their thoughts at the time of application using a three-point scale (*Yes*, *Maybe*, and *No*). The original inventory (Kaslow et al., 1992) showed acceptable to excellent internal consistency indices for the three factors of the triad ($0.70 < \alpha > 0.90$). In the CTI-C version adapted for Brazil (Teodoro et al., 2015), the most appropriate structure was a six-factor model, which separates the positive and negative cognitive triads. The Cronbach's α values for the six factors ranged from .60 to .75. The authors of the adapted version pointed out that the structure with six factors and the consequent reduction in the number of items per factor may explain the reduced internal consistency indices observed.

Children's Automatic Thoughts Scale (CATS, Schniering & Rapee, 2002). This self-report scale investigates the frequency at which children and adolescents aged 9-16 years have automatic thoughts related to internalizing and externalizing symptoms. The CATS

consists of 40 items rated on a five-point Likert scale (*never* to *all the time*). The original (Schniering & Rapee, 2002) and the adapted (Teodoro et al., 2013) versions of the scale are divided into four factors: social threat, physical threat, hostility, and personal failure. The Cronbach's α values found in this study were excellent for the total scale (α > .90) and good to excellent for the factors (.80 to .90) (Zanon & Filho, 2015).

Dysfunctional Attitudes Scale for Children (DAS-C; D'Alessandro & Burton, 2006). This self-report instrument is intended to assess dysfunctional attitudes in young people aged 9-16 years. The DAS-C consists of 22 items rated on a six-point scale (*strongly disagree* to *strongly agree*). The original scale (D'Alessandro & Burton, 2006) presented a unifactorial structure, with adequate indices of internal consistency and temporal stability. In the version adapted by Ohno et al. (2018), a three-factor structure (Social Approval, Self-performance and Love and Self-demand, and Need for Approval) was found via exploratory and confirmatory analyses, with acceptable to excellent Cronbach α values (.70 < α > .90) (Zanon & Filho, 2015).

Ethical and Research Procedures

The present study is part of a research project, previously approved by the Ethics Committee (CAAE 0041.0.390.000-09), conducted between 2010 and 2013. The research aimed to investigate the interaction between family relationships, EBP, and cognitive vulnerability. Schools were selected for convenience. All students were invited, but only those who were duly authorized by their guardians participated (via signature of the Free and Informed Consent). Participants filled the instruments in a special room, collectively, and had the support of the researchers in case they had any questions. Data collection occurred on three consecutive days, with average duration of 50 min per day.

Data analysis

Data analysis was performed using parametric statistics processed in the Statistical Package for the Social Sciences (SPSS) 23.0. Associations were analyzed using the Pearson's correlation coefficient and comparisons between groups were conducted using the Student's *t*-test for independent variable and One-way Analysis of Variance (one-way ANOVA) with *post-hoc* Bonferroni correction for the dependent variables. The effects were explored by Simple Linear Regression Analysis and the mediation hypothesis was tested by Multiple Regression Analysis by the PROCESS macro, as suggested by Hayes (2013).

Results that presented *p* values < .05 were considered statistically significant. Cohen's *d* was used to verify the effect size of differences in the *t*-test and ANOVA, considering: 0.2-0.4, small; 0.5-0.7, medium; > 0.8, large (Cohen, 1988). The Cohen's (1988) criteria (small, 0.1-0.29; medium, 0.3-0.49; large, > 0.5) were used as a reference to interpret the correlation coefficients.

As an independent variable, groups were created according to the participants' perceptions of their families. First, the mean between the child-mother, child-father and mother-father dyads was calculated separately for the perception of family conflict and affectivity. The final score was used in the correlation and regression analyses. Then the medians of the perception of family conflict and affectivity scores were calculated and used as a cut-off point for the division into groups according to family types.

To undertake the analyses related to levels of family conflict, dysfunctional cognitions, and EBP, categorizations were performed based on conflict perception scores. Thus, this variable was divided into three categories: *low conflict* – 0-25th percentile; *medium conflict* – 25-75th percentile; *high conflict* – 75-100th percentile.

Scores of dysfunctional cognitions, in turn, were created from the sum of the means of the participants' results in the CTI-C, CATS and DAS-C instruments. First, the *Z* score was calculated, and a total average was created for the four CATS factors. For the six CTI-C factors, the following were created: 1) an inverted positive score (from the mean between the inversely coded positive self, world, and future scores, so that higher scores reflect fewer positive cognitions) and a negative score (from the average between the negative self, world, and future scores); 2) a total average from the *inverted positive* and *negative* scores. Concerning to DAS-C, even though it has a three-factor structure, a general score was used in this study. Finally, from the averages calculated for each instrument, a total average of dysfunctional cognitions was created. The creation of this general score is theoretically based on the Beck's model (2013) and empirically based on the intercorrelation between the scores of the instruments.

Scores of the EBP were obtained from the CDI and YSR instruments. The latter provides a raw score for each of the eight EBP individually, whereas the former provides information on depressive symptoms. It was decided not to create a single general score between the two instruments, as it was done with dysfunctional cognitions, so that it enabled a broader and more detailed view of the EBP.

Results

Differences between sexes

To verify differences related to the sex of the study participants (hypothesis 1), comparison analyses were carried out between groups. Only two statistically significant differences were found, for intensity of depressive symptoms (t = -2.95; df = 368; boys: 7.95 ± 5.57; girls: 9.89 ± 6.68) and attention problems (t = -2.75; df = 355.2; boys: 54.82 ± 6.39; girls: 57.04 ± 8.85), in which girls had higher scores. However, the effect sizes were small (Cohen's d values of 0.32 for depressive symptoms and 0.29 for attention problems).

Associations between family relationships, dysfunctional cognitions, and EBP

Results of the correlation analysis showed statistical significance ($.001 < p > .05$), with positive coefficients between perception of family conflict, dysfunctional cognitions and EBP, and negative coefficients between perception of family affectivity and the same other variables. Moderate ($.30 < r > .43$) and positive correlations were found between perception of family conflict and the other variables (except for somatic complaints $r = .25$; $p < .01$), while perception of family affectivity was negatively correlated, but with small magnitude, with all variables (except for perception of family conflict: $r = .57$; $p < .01$). Moderate to strong positive correlations were found between dysfunctional cognitions and EBP ($.38 < r > .68$; $p < .01$). Among the EBP, all associations were positive ($p < .01$), with magnitudes ranging from small (0.25), for somatic complaints and rule-breaking behavior, to large (0.69), for anxious/depressed and social problems, evidencing that the problems are not completely independent of each other.

Difference between family types

Based on the classification of perception of family conflict and affectivity scores into low (< 50th percentile) and high (≥ 50th percentile), participants were grouped into four types of family: type I ($n = 130$; 35.0 %), type II ($n = 59$; 15.9 %), type III ($n = 57$; 15.4 %), and type IV ($n = 125$; 33.7 %). Aiming to test whether adolescents who rated their families as type IV (high conflict/low affectivity) would present more dysfunctional cognitions and EBP, while those who rated them as type I (low conflict/high affectivity) would present fewer dysfunctional cognitions and EBP (hypothesis 2). One-way ANOVA was carried out, with type of family as the independent variable and dysfunctional cognitions and each of the EBP as the dependent variables. All results were significant ($p \leq .001$), with all differences presenting a medium effect size ($0.50 < d > 0.70$), except for withdrawn/depressed, somatic complaints, and thought problems, with small effect sizes ($d < 0.5$) (table 1).

In addition to the hypothesized results about the differences between family types I and IV, other differences with statistical significance were also observed. Those with medium or large effect sizes ($d \geq 0.5$) are presented below. Comparison between the groups with high affectivity (types I and II) showed that the one with low conflict (type I) had significantly lower means in some variables, with differences with medium effect sizes for dysfunctional cognitions, depressive symptoms, anxious/depressed, somatic complaints, social problems, attention problems, rule-breaking behavior, and aggressive behavior. Comparison between the groups with low affectivity (types III and IV) showed that the one with low conflict (type III) also presented lower means in some variables, with differences with large effect sizes for dysfunctional cognitions and medium effect sizes for depressive symptoms, withdrawn /depressed, social problems, rule-breaking behavior, and aggressive behavior. It should be noted that no significant differences were found between pairs of groups in which there was no variation in conflict (types I and III; types II and IV).

Given the results with the differences between types of family, as well as the moderate correlations between perception of family conflict and dysfunctional cognitions and EBP, it was decided to explore conflict more comprehensively. Analyses were then carried out to verify whether cognitions and EBP varied between different levels of perception of family conflict (low, medium, and high). Descriptive statistics (means and standard deviations), inferential statistics (ANOVA), and effect sizes (Cohen's *d*) are shown in table 2. Only the most important differences (those with large or medium effect sizes) are presented below.

As for the results of dysfunctional cognitions, ANOVA was significant ($F(2.368) = 27.511$; $p < .001$) and *post-hoc* Bonferroni's correction revealed that they varied significantly between the three conflict groups (low < medium < high). Large and medium effect sizes were found in the comparisons between the low and high and between the medium and high conflict groups, respectively. ANOVA was also significant in all comparisons conducted with the EBP (low < medium < high). Here, it is worth highlighting the differences with large effect sizes between the low and high conflict groups for depressive symptoms, anxious/depressed, social problems, attention problems, rule-breaking behavior, and aggressive behavior. Among the same groups, effect sizes were medium for withdraw/depressed, somatic complaints, and thought problems. Differences with medium effect sizes were also found in comparisons between the medium and high conflict groups for depressive symptoms, social problems, thought problems, rule-breaking behavior, and aggressive behavior.

Table 1

Mean scores on dysfunctional cognitions and EBP and difference between groups according to family type in the Familiograma (Family Chart - FG)

		Family type	*n*	*M*	*SD*	*F*	*p*-value	Groups with post-hoc difference (p <0.05)	Cohen's *d*
Dysfunctional cognitions		I	130	0.78	0.66	15.33	*p*<.001	I<II	0.6
		II	59	1.27	0.88			I<IV	0.7
		III	57	0.73	0.56			III<II	0.7
		IV	125	1.36	0.96			III<IV	0.8
Emotional and behavioral problems (EBP)	DS	I	130	6.97	5.02	15.56	*p*<.001	I<II	0.5
		II	59	9.63	5.8			I<IV	0.7
		III	57	8.35	4.53			III<IV	0.5
		IV	124	11.35	7.57				
	A/D	I	124	59.35	7.5	8.38	*p*<.001	I<II	0.5
		II	58	63.4	8.97			I<IV	0.5
		III	56	60.36	7.34			III<IV	0.4
		IV	120	64.61	10.46				
	W/D	I	124	54.48	5.68	8.41	*p*<.001	I<IV	0.4
		II	58	57.22	6.67			III<IV	0.5
		III	56	54.05	5.2				
		IV	120	58.4	9.1				
	SC	I	124	56.12	6.76	5.39	*p*<.001	I<II	0.5
		II	58	59.81	8.3			I<IV	0.4
		III	56	56.63	7.6				
		IV	120	59.44	8.57				
	SP	I	124	54.89	6.23	1.3	*p*<.001	I<II	0.5
		II	58	57.91	6.39			I<IV	0.6
		III	56	54.38	5.01			III<II	0.6
		IV	120	58.89	7.8			III<IV	0.7
	TP	I	124	54.85	6.51	5.43	*p*<.001	I<IV	0.4
		II	58	57.86	7.73			III<IV	0.4
		III	56	54.64	6.45				
		IV	120	58.2	9.39				
	AP	I	124	53.57	5.79	1.1	*p*<.001	I<II	0.7
		II	58	58.6	7.77			I<IV	0.6
		III	56	54.77	6.72			III<II	0.5
		IV	120	58.23	9.63			III<IV	0.4
	RBB	I	124	51.8	3.1	1.1	*p*<.001	I<II	0.5
		II	58	54.1	5.96			I<IV	0.7
		III	56	52.21	3.78			III<IV	0.6
		IV	120	54.73	5.24				
	AB	I	124	54.44	5.82	11.03	*p*<.001	I<II	0.6
		II	58	58.76	8.39			I<IV	0.7
		III	56	55.13	5.88			III<IV	0.6
		IV	120	59.3	8.75				

Notes. Family types in the FG: I: high affectivity and low conflict; II: high affectivity and high conflict; III: low affectivity and low conflict; IV: low affectivity and high conflict. DS: Depressive Symptoms (CDI); A/D: Anxious/Depressed; W/D: Withdrawn/Depressed; SC: Somatic Complaints; SP: Social Problems; TP: Thought Problems; AP: Attention Problems; RBB: Rule-Breaking Behavior; AB: Aggressive Behavior.

Table 2

Mean scores on dysfunctional cognitions and EBP and difference between groups according to conflict intensity

		Groups of conflict awareness	*n*	*M*	*SD*	*F*	*p*-value	Groups with post-hoc difference (p <0.05)	Cohen's *d*
Dysfunctional cognitions		Low	91	0.7	0.67	27.51	*p*<.001	Low<Medium	0.4
		Medium	188	0.97	0.72			Low<High	0.98
		High	92	1.54	1.01			Medium<High	0.7
Emotional and behavioral problems (EBP)	DS	Low	91	6.54	4.62	26.53	*p*<.001	Low<Medium	0.4
		Medium	188	8.54	5.34			Low<High	0.98
		High	92	12.73	7.86			Medium<High	0.6
	A/D	Low	90	58.91	7.5	13.51	*p*<.001	Low<High	0.8
		Medium	179	61.58	8.73			Medium<High	0.4
		High	89	65.66	9.93				
	W/D	Low	90	53.74	4.93	11.73	*p*<.001	Low<Medium	0.4
		Medium	179	56.01	6.51			Low<High	0.7
		High	89	58.87	9.59			Medium<High	0.35
	SC	Low	90	55.57	6.89	8.15	*p*<.001	Low<High	0.6
		Medium	179	57.92	7.67				
		High	89	60.26	8.76				
	SP	Low	90	54.03	5.1	17.41	*p*<.001	Low<Medium	0.4
		Medium	179	56.37	6.93			Low<High	0.9
		High	89	59.82	7.3			Medium<High	0.5
	TP	Low	90	54.42	6.3	15.96	*p*<.001	Low<High	0.7
		Medium	179	55.52	6.79			Medium<High	0.6
		High	89	60.3	10.01				
	AP	Low	90	53.29	5.86	14.98	*p*<.001	Low<Medium	0.4
		Medium	179	55.87	7.1			Low<High	0.8
		High	89	59.55	10.16			Medium<High	0.4
	RBB	Low	90	51.37	2.63	26.36	*p*<.001	Low<Medium	0.4
		Medium	179	52.77	3.89			Low<High	0.95
		High	89	55.97	6.35			Medium<High	0.6
	AB	Low	90	55.39	5.96	3.49	*p*<.001	Low<Medium	0.2
		Medium	179	56.29	6.38			Low<High	0.8
		High	89	61.52	9.81			Medium<High	0.6

Notes. Low conflict ($p < 25$); medium conflict ($25 \leq p \geq 75$); high conflict ($p > 75$). DS: Depressive Symptoms (CDI); A/D: Anxious/Depressed; W/D: Withdrawn/Depressed; SC: Somatic Complaints; SP: Social Problems; TP: Thought Problems; AP: Attention Problems; RBB: Rule-Breaking Behavior; AB: Aggressive Behavior.

Effect of family relationships on dysfunctional cognitions and EBP

To test the perceptions of family conflict and affectivity as predictors of dysfunctional cognitions and EBP, and dysfunctional cognitions as predictors of EBP (hypothesis 3), Simple Linear Regression analyses were carried out using the Stepwise method. The results are shown in table 3.

Initially, two analyses were carried out to verify whether perceptions of family conflict and affectivity were predictors of dysfunctional cognitions. The first included the perception of conflict as the independent variable and dysfunctional cognitions as the dependent variable. A significant regression model was found ($F(1.369) = 85.437$; $p < .001$), and perception of family conflict was responsible for 19 % (adjusted R^2) of the variation in dysfunctional cognitions, with a significant beta ($\beta = 0.434$; $p < .001$). In the second analysis, which had perception of family affectivity as the independent variable, a significant regression model was also found ($F(1.369) = 22.202$; $p < .001$), and this variable was responsible for 5 % (adjusted R^2) of the variation in dysfunctional cognitions, also with a significant beta ($\beta = -0.238$; $p < .001$).

To verify the perceptions of family conflict and affectivity and dysfunctional cognitions as predictors of EBP, new regression analyses were carried out, and all results were statistically significant, with $p < .001$ for conflict and cognitions and $p < .05$ for affectivity. In all cases, the predictive power of dysfunctional cognitions about the EBP was greater than that of perception of family conflict, which, in turn, was greater than that of the perception of family affectivity.

To test the model of mediation of dysfunctional cognitions in the relationship between the perception of family conflict and affectivity and the EBP (hypothesis 4), Multiple Regression Analyses were carried out. Perception of family conflict showed regression coefficients of 0.05 ($p < .001$) for the relationship between this variable and dysfunctional cognitions in the analysis with depressive symptoms and of 0.06 ($p < .001$) in the analysis with the other EBP. In the relationship between dysfunctional cognitions and EBP, all results were also significant ($p < .001$), with regression coefficients varying between 1.53, for rule-breaking behavior, and 7.08, for anxious/depressed. Finally, in the relationship between conflict and the EBP, significant results were observed for depressive symptoms ($p < .001$), social problems ($p < .05$), attention problems, rule-breaking behavior, and aggressive behavior ($p < .001$), with regression coefficients ranging from 0.11 to 0.29. The analyses with anxious/depressed, withdrawn/depressed, social complaints, and thought problems did not show statistical significance.

In the analyses with affectivity, all the results of the regression coefficients of the relationship between this variable and dysfunctional cognitions were -0.02 ($p < .001$). In the relationship between dysfunctional cognitions and the EBP, all results were significant ($p < .001$), with regression coefficients ranging from 1.94, for rule-breaking behavior, to 7.15, for anxious/depressed. Finally, in the relationship between perception of family affectivity and the EBP, only the results of analyses with depressive symptoms, rule-breaking behavior, and aggressive behavior were significant, with regression coefficients of -0.10 ($p < .001$), -0.06, and -0.09 ($p < .05$), respectively.

Table 3

Effect of perception of family conflict and affectivity and dysfunctional cognitions on the EBP

	Dysfunctional cognitions		DS		A/ D		W/D		SC		SP		TP		AP		RBB		AB	
	ß	Adjusted R^2	ß	Adjusted R^2	ß	Adjusted R^2	ß	Adjusted R^2	ß	Adjusted R^2	ß	Adjusted R^2	ß	Adjusted R^2	ß	Adjusted R^2	ß	Adjusted R^2	ß	Adjusted R^2
Family conflict	0.43	19%	0.41	17%	0.33	10%	0.33	11%	0.25	6%	0.35	12%	0.30	9%	0.35	12%	0.35	12%	0.42	17%
Family affectivity	-0.24	5%	-0.28	8%	-0.20	4%	-0.20	4%	-0.11	1%	-0.15	2%	-0.11	1%	-0.17	3%	-0.19	3%	-0.20	4%
Dysfunctional cognitions	-	-	0.67	45%	0.68	46%	0.60	36%	0.44	19%	0.61	37%	0.57	32%	0.46	20%	0.38	14%	0.50	25%

Note. Result significant at the 0.05 level. DS: Depressive Symptoms (CDI); A/D: Anxious/Depressed; W/D: Withdrawn/Depressed; SC: Somatic Complaints; SP: Social Problems; TP: Thought Problems; AP: Attention Problems; RBB: Rule-Breaking Behavior; AB: Aggressive Behavior.

In summary, the results point to an indirect effect of perception of family affectivity only on depressive symptoms, rule-breaking behavior and aggressive behavior, and to an indirect effect of perception of family conflict on these same variables, as well as on social problems and attention problems, both having dysfunctional cognitions as partial mediators. The mediation model will be further explored in the Discussion section.

Discussion

This study sought to investigate the interactions between family relationships, dysfunctional cognitions, and EBP in adolescents. Significant associations were found between all variables, with perception of family affectivity and dysfunctional cognitions showing the lowest and highest coefficients, respectively. Regarding perception of family conflict, the results showed positive and moderate associations with dysfunctional cognitions, and positive and weak to moderate associations with EBP. In part, these results agree with those of a previous study carried out using the Familiograma (Family Chart - FG) which reported that perception of family conflict had higher correlation rates with internalizing symptoms than with perception of family affectivity (Hess et al., 2013). In addition, according to Beck (2013), dysfunctional cognitions are common to EBP, justifying the higher magnitude correlations between these two variables.

Regarding comparison between the sexes, contrary to expectations (hypothesis 1), there was no significant difference between males and females, except for depressive symptoms and attention problems, in which girls had higher scores. The literature indicates that male adolescents tend to have more externalizing problems, while female adolescents present more internalizing problems (Rescorla et al., 2007; Rocha, 2012). A study based on the YSR, however, found a similar level of internalizing and externalizing psychopathologies in older male and female adolescents (Zubeidat et al., 2018), which corroborates the findings of the present study.

One explanation for the similarity between the results for males and females concerns the age group of the participants, as some problems only consolidate in adolescence. For example, according to Rocha (2012), adolescents aged ≥ 15 years tend to have more EBP than their younger peers. Furthermore, Booth et al. (2019) found a pattern that reflected a worsening in mood (with increased depression and rumination) and an increase in impulsive behaviors over the course of adolescence. Moreover, Shulman and Scharf (2018) argue that psychopathologies can vary according to context and conditions, with some being more difficult for female adolescents (who would, as a consequence, suffer higher levels of stress), while others are more stressful for male adolescents. Therefore, this pattern may vary across different countries and cultures. Finally, another possible explanation for the similarity between the sexes is the non-clinical sample used in this study, which may indicate that the participants do not have problems at high levels.

In the ANOVA performed to test hypothesis 2, it was expected that adolescents who rated their families as type IV (high conflict/low affectivity) would have higher scores in dysfunctional cognitions and EBP, whereas those who rated them as type I (low

conflict/high affectivity) would present lower scores. This hypothesis was confirmed, since the results showed significantly lower means of dysfunctional cognitions and EBP in adolescents from type I families compared with those from type IV families.

Nevertheless, the results showed some differences that were not expected. In all family types with high conflict, the scores on dysfunctional cognitions and EBP were also higher. On the other side, while conflict was low, dysfunctional cognitions and EBP were also lower. However, this same result was not found for affectivity, which may indicate that perception of family conflict is more associated with variations in dysfunctional cognitions and EBP than perception of family affectivity.

In a study addressing interparental conflict, McCauley et al. (2019) found that some factors, such as academic achievement and peer support, had the potential to offset the impact of conflict on children's lives, but were not able to lessen the intensity of its effects. In the case of the present study, it may be that affectivity fits as a factor that protects against the impacts of conflict in the lives of adolescents, but does not have enough power to prevent the emergence of dysfunctional cognitions and EBP. This proposition can be more comprehensively investigated in future studies.

In the analyses of the family types, there were cases in which no significant differences were found regarding conflict. In the case of somatic complaints (types III and IV did not differ) and thought problems (types I and II did not differ) (see table 1), a possible explanation is found in the regression analyses. For those that included somatic complaints and thought problems as dependent variables, only dysfunctional cognitions were predictors, and perceptions of conflict and affectivity were not significant. This suggests that the family relationships do not have such a relevant direct influence on these two problems, and will be better addressed later, together with the discussion about the mediation hypothesis.

From the new perspective that, more than the perception of family affectivity, the perception of family conflict is related to dysfunctional cognitions and EBP, it was investigated whether the intensity of this variable was also important. The results showed significant differences between at least two of the three levels of perception of family conflict (low, medium, and high), and the higher the level, the higher the scores in dysfunctional cognitions and EBP. This indicates that the higher the family conflicts, the higher the levels of dysfunctional cognitions and EBP in the children; consequently, the greater the chances of developing psychopathologies, considering the cognitive theory, which associates dysfunctional cognitions with mental disorders (Beck, 2013).

This hypothesis is in line with the results reported by Weymouth et al. (2019), who followed up 768 6^{th} to 8^{th} grade students and their families. They investigated the impact of interparental conflict on child cognitions and the risk for development of social anxiety. Their results showed that exposure to interparental conflict is associated with adolescent threat appraisal, which, in turn, increases the risk of social anxiety symptoms. In addition, Lara et al. (2021), in a review study, found associations between maladaptive family functioning, such as family conflict, interparental conflict, and parenting practices, and negative outcomes in adolescent cognitions and EBP.

Regression analyses were conducted to test hypotheses 3 and 4. Hypothesis 3 was confirmed, given that the results showed an effect of perceptions of family conflict and

affectivity on the participants' dysfunctional cognitions and EBP, and of dysfunctional cognitions on EBP. However, corroborating the results of the correlation coefficients and ANOVA, the predictive power of affectivity was lower than that of conflict. Furthermore, dysfunctional cognitions showed higher prediction rates than the other two variables, which is supported by the cognitive theory (Beck, 2013).

A possible explanation for affectivity not having appeared as an important factor in the relationship with dysfunctional cognitions and EBP is that, in this study, only problems and negative aspects of cognitions were addressed. Perhaps affectivity is not a protective factor against these two variables, but it is important for the emergence and maintenance of more functional and positive cognitions, emotions, and behaviors, which, indirectly, would hinder the installation of psychopathologies, as a form of compensation. Therefore, future studies should include both functional and dysfunctional aspects of cognitions and behaviors to investigate this proposition.

Another possibility to explain the low magnitude of these relationships would be the age of the study participants. According to Rocha (2012), EBP have a greater tendency to appear in adolescents aged ≥ 15 years, and the average age of participants in the present study was 12 years. Furthermore, Shulman and Scharf (2018) discuss important factors, in addition to relationships with parents, that would help adolescents cope with high-stress conditions, such as low sensitivity to rejection and internal coping skills. It may be that perception of family affectivity is responsible only for part of the protection against psychopathologies in adolescents – a proposition that should be better investigated in future studies.

The fourth hypothesis tested in this study concerns the partial mediation of dysfunctional cognitions in the relationship between family perception and EBP. Analyses evidenced that perceptions of family conflict and affectivity had a significant effect on all EBP, although the percentage of explained variance was lower for some of them, as in thought problems and somatic complaints (see table 3). When dysfunctional cognitions were included in the equation in the Multiple Regression Analysis, their effect was significant for all EBP, while the effect of perception of family conflict: 1) decreased, but remained significant, for depressive symptoms, social problems, attention problems, rule-breaking behavior, and aggressive behavior; 2) lost its significance for anxious/depressed, withdrawn/depressed, somatic complaints, and thought problems. Regarding the affectivity analyses, dysfunctional cognitions also showed an effect on all EBP, while the effect of perception of family affectivity: 1) decreased, but remained significant, for depressive symptoms, rule-breaking behavior, and aggressive behavior; 2) lost its significance for anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, and attention problems.

These results suggest that hypothesis 4 was partially correct. According to Tabachnick and Fidell (1996), when there is an effect between two variables (as it occurred with family conflict and affectivity with EBP) and this effect decreases when a third variable is included in the equation (in this case, dysfunctional cognitions), this is considered a partial mediation. On the other hand, once the third variable is included and there is no longer any effect between the first two variables, this is considered total mediation.

Thus, dysfunctional cognitions seem to partially mediate the relationship between perception of family conflict and depressive symptoms, social problems, and attention problems, rule-breaking behavior, and aggressive behavior. However, differently from what was expected, the results show that this variable totally mediates the relationship between perception of family conflict and anxious/depressed, withdrawn/depressed, somatic complaints, and thought problems.

The same occurred with perception of family affectivity, as an indirect effect of this variable, mediated by dysfunctional cognitions, was found on depressive symptoms, rule-breaking behavior and aggressive behavior, thus confirming the initial hypothesis of this study. However, in most cases, there seems to be a total mediation of dysfunctional cognitions, which occurred in the relationships with anxious/depressed, withdrawn/depressed, somatic complaints, social problems, thought problems, and attention problems.

This occurrence of total mediation of dysfunctional cognition may explain the fact that lower percentages of explained variance in conflict and affectivity were found precisely for somatic complaints and thought problems. Moreover, this explanation also corroborates the fact that, in the ANOVA conducted with the types of family and each of these two problems, no significant differences were found between all the groups in which the conflict varied, as it occurred with the other problems.

Although no Brazilian studies that included the relationship between family perception, dysfunctional cognitions, and EBP have been found, these results are similar to those of some studies carried out in other countries which included cognitions as mediators of the relationship between the other two variables. As examples, Throuvala et al. (2019) demonstrated that self-cognition mediated the relationship between parental rejection and Internet Gambling Disorder in 225 young adults; Shi et al. (2017) also demonstrated the mediation of self-esteem in the relationship between family functioning and internet addiction in a study conducted with 3,289 students.

It should be noted that the present study has some limitations. First, the sample was selected for convenience and there was no differentiation between clinical and non-clinical groups, which may hinder generalization of the results. This differentiation could contribute to more accurate results in future studies.

Although adolescents already have the social and cognitive maturity to report their feelings and behaviors (Achenbach, 1991), and the knowledge that it is not the facts and experiences themselves that influence the emergence of dysfunctional cognitions, but rather the interpretations that each one gives to these events (Beck, 2013), the use of self-report instruments answered by a single informant may have been another limitation to this study. Responses collected from other sources of information could serve as a complement, especially in relation to more easily observable factors, such as behavioral problems. This complementation would also help reduce the effects of social desirability and difficulties in remembering in adolescents.

Third, despite showing indications of effects between variables, this study was conducted using a cross-sectional design, which does not allow confirmation of such influence. It should also be noted that data collection was carried out between 2010 and 2013. Because of family and generational changes, especially those arising as a result of

the COVID-19 pandemic, it is suggested that future studies explore these family relationships, dysfunctional cognitions, and EBP longitudinally. Furthermore, it is suggested that cognition and functional behaviors be included, so that the predictive role of perception of family affectivity about them could be investigated.

Conclusions

Overall, the results of this study indicate that, for both female and male adolescents, perception of family conflict influences dysfunctional cognitions and EBP, whereas perception of family affectivity does not seem to be sufficiently robust to prevent the appearance of the same aspects. In addition, dysfunctional cognitions present themselves as an important mediator of the relationship between the family and child problems, confirming the basis of the cognitive model (Beck, 2013).

As for clinical implications, the results of this study draw attention to the importance to treat child and adolescent psychopathologies addressing not only the patients' dysfunctional behaviors and cognitions, but also the functionality of intrafamily relationships aiming to reduce the interparental conflicts as well as family conflicts as a whole. It is suggested that focus be placed on teaching parents problem-solving skills so that they can be role models for their children and provide them with the ability to have more functional discussions. This is expected to reduce the chances of developing dysfunctional cognitions and, consequently, future psychopathologies.

Funding

The data analyzed in this article were collected from a research project funded by the National Council for Scientific and Technological Development (CNPq) and the Research Support Foundation of the State of Minas Gerais (Fapemig).

References

Achenbach, T. M. & Rescorla, L. A. (2001). *Manual for the ASEBA school-age forms & profiles*. University of Vermont, Research Center for Children, Youth & Families.

Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist/4–18 and 1991 profile*. University of Vermont.

Achenbach, T. M., Ivanova, M. Y., & Rescorla, L. A. (2017). Empirically based assessment and taxonomy of psychopathology for ages 1½–90+ years: developmental, multi-informant, and multicultural findings. *Comprehensive psychiatry, 79*, 4-18. https://doi.org/10.1016/j.comppsych.2017.03.006

Amici, F., Röder, S., Kiess, W., Borte, M., Zenclussen, A. C., Widdig, A., & Herberth, G. (2022). Maternal stress, child behavior and the promotive role of older siblings. *BMC Public Health, 22*(863), 1-16. https://doi.org/10.1186/s12889-022-13261-2

Beck, J. S. (2013). *Terapia Cognitivo-comportamental: Teoria e Prática* (S. M. Rosa, Trad.; 2nd ed.). Artmed (Original work published 1995).

Booth, C., Songco, A., Parsons, S., Heathcote, L. C., & Fox, E. (2019). The CogBIAS longitudinal study of adolescence: cohort profile and stability and change in measures across three waves. *BMC Psychology, 7*(73), 1-20. https://doi.org/10.1186/s40359-019-0342-8

Bordin, I. A., Rocha, M. M., Paula, C. S., Teixeira, M. C. T. V., Achenbach, T. M., Rescorla, L. A., & Silvares, E. F. M. (2013). Child Behavior Checklist (CBCL), Youth Self-Report (YSR) and Teacher's Report Form (TRF): an overview of the development of the original and Brazilian versions. *Cadernos de Saúde Pública, 29*(1), 13-28. https://doi.org/10.1590/S0102-311X2013000100004

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Pub.

D'Alessandro, D. U. & Burton, K. B. (2006). Development and validation of the Dysfunctional Attitudes Scale for Children: Tests of Beck's cognitive diathesis-stress theory of depression, of its causal mediation component, and of developmental effects. *Cognition Therapy Research, 30*, 335-353. https://doi.org/10.1007/s10608-006-9046-5

Faltýnková, A., Blinka, L., Ševcíková, A., & Husarova, D. (2020). The Associations between Family-Related Factors and Excessive Internet Use in Adolescents. *International Journal of Environmental Research and Public Health, 17*, 1754. https://doi.org/10.3390/ijerph17051754

Gouveia, V. V., Barbosa, G. A., Almeida, H. J. F., & Gaião, A. A. (1995). Inventário de depressão infantil – CDI: Estudo de adaptação com escolares de João Pessoa. *Jornal Brasileiro de Psiquiatria, 44*, 345-349.

Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach.* Guilford Press.

Hess, A. R. B., Teodoro, M. L. M., & Falcke, D. (2013). Family relations, stressful events and internalizing symptoms in adolescence: a longitudinal study. *Spanish Journal of Psychology, 16*(57), 1-7. https://doi.org/10.1017/sjp.2013.57

Kaslow, N. J., Stark, K. D., Printz, B., Livingston, R., & Tsai, S. L. (1992). Cognitive Triad Inventory for Children: development and relation to depression and anxiety. *Journal of Clinical Child Psychology, 21*(4), 339-347. https://doi.org/10.1207/s15374424jccp2104_3

Kovacs, M. (1992). *Children Depression Inventory CDI: Manual*. Multi-Health Systems.

Kovacs, M., & Devlin, B. (1998). Internalizing disorders in childhood. *Journal of Child Psychology and Psychiatry, 39*, 47-63. https://doi.org/10.1111/1469-7610.00303

Lara, A. C. D. C., Carvalho, T. M., & Teodoro, M. L. M. (2021). Relações familiares e cognições disfuncionais de adolescentes: uma revisão sistemática. *Psicologia em Pesquisa, 15*(1), 1-19. https://doi.org/10.34019/1982-1247.2021.v15.29297

McCauley, D. M., Weymouth, B. B., Feinberg, M. E., & Fosco, G. M. (2019). Evaluating school and peer protective factors in the effects of interparental conflict on adolescent threat appraisals and self-efficacy. *Journal of Adolescence, 71*, 28-37. https://doi.org/10.1016/j.adolescence.2018.12.005

Ohno, P. M., Froeseler, M. V. G., & Teodoro, M. L. M. (2018). Adaptação e propriedades psicométricas da Escala de Atitudes Disfuncionais para Crianças e Adolescentes. *Estudos de Psicologia (Campinas), 35*(2), 171-180. http://dx.doi.org/10.1590/1982-02752018000200006

Rescorla, L. A., Achenbach, T. M., Ivanova, M. Y., Dumenci, L., Almqvist, F., Bilenberg, N., Bird, H., Broberg, A., Dobrean, A., Döpfner, M., Erol, N., Forns, M., Hannesdottir, H., Kanbayashi, Y., Lambert, M. C., Leung, P., Minaei, A., Mulatu, M. S., Novik, T. S. ... Verhulst, F. (2007). Epidemiological comparison of problems and positive qualities reported by adolescents in 24 countries. *Journal of Consulting and Clinical Psychology, 75*, 351-358. https://doi.org/10.1037/0022-006X.75.2.351

Rocha, M. (2012). *Evidências de Validade do "Inventário de Autoavaliação para Adolescentes" (YSR/2001) para a população brasileira* [Doctoral dissertation, Universidade de São Paulo]. https://doi.org/10.11606/T.47.2012.tde-12062012-153735

Schniering, C. A. & Rapee, R. M. (2002). Development and validation of a measure of children's automatic thoughts: the children's automatic thoughts scale. *Behavior Research and Therapy, 40*(9), 1091-1109. https://doi.org/10.1016/S0005-7967(02)00022-0

Shi, X., Wang, J., & Zou, H. (2017). Family functioning and internet addiction among Chinese adolescents: the mediating role of self-esteem and loneliness. *Computers in Human Behavior, 76*, 201-210. https://doi.org/10.1016/j.chb.2017.07.028

Shulman, S. & Scharf, M. (2018). Adolescent psychopathology in Times of Change: The need for integrating a developmental psychopathology perspective. *Journal of Adolescence, 65*, 95-100. https://doi.org/10.1016/j.adolescence.2018.03.005

Tabachnick, B. & Fidell, L. S. (1996). *Using multivariate statistics* (3rd ed.). Harper Collins.

Teodoro, M. L. M., Andrade, A. & Castro, H. A. M. (2013). Escala de Pensamentos Automáticos para Crianças e Adolescentes (EPA): adaptação e propriedades psicométricas. *Psico USF, 18*(1), 89-98. http://old.scielo.br/scielo.php?script=sci_arttext&pid=S1413-82712013000100010&lng=en&nrm=iso&tlng=pt

Teodoro, M. L. M., Cardoso, B. M., & Freitas, A. C. H. (2010). Afetividade e conflito familiar e sua relação com a depressão em crianças e adolescentes. *Psicologia: Reflexão e Crítica, 23*(2), 324-333. http://dx.doi.org/10.1590/S0102-79722010000200015

Teodoro, M. L. M., Froeseler, M. V. G., Almeida, V. M., & Ohno, P. M. (2015, april). Inventário da Tríade Cognitiva para Crianças e Adolescentes: adaptação e propriedades psicométricas. *Avaliação Psicológica, 14*(1), 63-72. http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S1677-04712015000100008

Throuvala, M. A., Janikian, M., Griffiths, M. D., Rennoldson, M., & Kuss, D. J. (2019). The role of family and personality traits in Internet gaming disorder: a mediation model combining cognitive and attachment perspectives. *Journal of Behavioral Addictions, 8*(1), 48-62. https://doi.org/10.1556/2006.8.2019.05

Wang, Y. (2022). Effects of parenting style on normal and dysfunctional emotional behaviors in small children. *Psychiatria Danubina, 34*(1), 34-40. https://doi.org/10.24869/psyd.2022.34

Weymouth, B. B., Fosco, G. M., Mak, H. W., Mayfield, K., LoBraico, E. J., & Feinberg, M. E. (2019). Implications of Interparental Conflict for Adolescents' Peer Relationships: A Longitudinal Pathway through Threat Appraisals and Social Anxiety Symptoms. *Developmental Psychology, 55*(7), 1509-1522. https://doi.org/10.1037/dev0000731

Zanon, C. & Filho, N. H. (2015). Fidedignidade. Em C. S. Hutz, D. R. Bandeira, & C. M. Trentini (Orgs.), *Psicometria* (pp. 85-95). Artmed.

Zubeidat, I., Dallasheh, W., Fernández-Parra, A., Sierra, J. C., & Salinas, J. M. (2018). Youth self-report factor structure: detecting sex and age differences in emotional and behavioral problems among Spanish school adolescent sample. *International Journal of Social Science Studies, 6*(10), 35-49. https://doi.org/10.11114/ijsss.v6i10.3649

How to cite: Lara, A. C. D. C., Froeseler, M. V. G., Ohno, P. M., & Teodoro, M. L. M. (2022). Family relations, dysfunctional cognitions, and child emotional and behavioral problems. *Ciencias Psicológicas*, *16*(2), e-2370. https://doi.org/10.22235/cp.v16i2.2370

Authors' participation: a) Conception and design of the work; b) Data acquisition; c) Analysis and interpretation of data; d) Writing of the manuscript; e) Critical review of the manuscript.
A.C. D. C. L. has contributed in a, c, d, e; M. V. G. F. in b, d, e; M. P. O. in b, c, d; M. L. M. T. in a, c, e.

Scientific editor in charge: Dra. Cecilia Cracco.