

Aggressiveness and Emotional Comprehension in Children from the Central Region of Cuba

Agresividad y comprensión emocional en niños y niñas de la región central de Cuba

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Abstract

The research was carried out with the aim of determining the particularities of emotional understanding in children with aggressive manifestations with respect to their age peers who did not show aggression, in addition to establishing the relationship between the indicators of emotional understanding with different variants of aggressiveness. A descriptive-correlational study was carried out with a non-experimental, cross-sectional design. The sample was non-probabilistic and consisted of 102 children from different cities in the central region of Cuba (51 with aggressive manifestations and 51 without this condition). The main techniques for the collection of information were: Emotional Understanding Test, the Aggression Scale of Little et al. and the psychological interview. The children with aggressive manifestations studied were characterised by difficulties in emotional understanding, and their differences with the children without aggressive manifestations were notable in practically all indicators, with the exception of the external level of emotional understanding and the understanding of the possibility of simulating emotions. Emotional understanding was shown to be related to displays of aggression in general, being stronger with respect to the reactive-direct variant and lower with respect to more instrumental forms of aggression. These results reveal the need to consider a differential pattern between the different variants of aggression in their link with emotional aspects.

Keywords: emotions; emotional development; aggression; childhood; aggression.

Resumen

La investigación se realizó con el propósito de determinar las particularidades de la comprensión emocional en niños y niñas con manifestaciones agresivas con respecto a sus pares etarios que no manifestaban agresiones, además de establecer la relación existente entre los indicadores de la comprensión emocional con diferentes variantes de agresividad. Se llevó a cabo un estudio descriptivo-correlacional, con un diseño no experimental, transversal. La muestra fue no probabilística y quedó integrada por 102 niñas y niños de diferentes ciudades de la región central de Cuba (51 con manifestaciones agresivas y 51 sin esta condición). Las principales técnicas para la recogida de información fueron: Test de Comprensión Emocional, la Escala de Agresión de Little et al. y la entrevista psicológica. Las criaturas con manifestaciones agresivas estudiados se caracterizaron por presentar dificultades en la comprensión emocional, sus diferencias con las y los niñas/os sin manifestaciones agresivas fueron notables en prácticamente todos los indicadores, con excepción del nivel externo de comprensión emocional y la comprensión de la posibilidad de simular emociones. La comprensión emocional demostró tener relación con las manifestaciones de agresividad en general, siendo más fuerte con respecto a la variante reactiva-directa y menor con respecto a formas más instrumentales de agresión. Estos resultados revelan la necesidad de considerar un patrón diferencial entre las distintas variantes de agresión en su vínculo con aspectos emocionales.

Palabras clave: emociones; desarrollo emocional; agresividad; infancia

Introduction and objectives

Aggression in the infant-juvenile stage is a problem present in most countries in the world (Gómez-Ortiz et al., 2017; Trucco and Inostroza, 2017). Its presence interferes in the teaching-learning process and in the evolutionary development of the individuals involved, with negative consequences for their well-being, health and social relationships, and can cause physical and psychological harm to others (Jiménez and Estévez, 2017). It is therefore a problem that continues to require special attention from professionals and a deep understanding from researchers.

Although it is a basic and primary behaviour in the activity of living beings for their survival (Anderson and Bushnam, 2018), in humans, given their status as social beings, it can be replaced by other more prosocial mechanisms, or accentuated and chronified into adulthood in hostile contexts that facilitate it (Bjorklund and Hawley, 2014). For example, people who are more aggressive at age eight are more likely to continue to be aggressive as adults, in a more aggravated form (Girard et al., 2019). It is therefore an important task to identify the factors associated with childhood aggression and its maintenance, and to develop activities to prevent it.

According to studies conducted by the Economic Commission for Latin America and the Caribbean (ECLAC), the incidence of aggression in schoolchildren in Cuba is much lower than in several Latin American countries (Trucco and Inostroza, 2017). However,

research conducted in this context (Angulo Gallo et al., 2019; Rodney and García, 2020) has identified the presence of aggressive behaviours in schoolchildren that are of concern to educational agents.

The prevention of these behaviours is a priority task. Several studies focused on this purpose have demonstrated the importance of children's socioemotional competences as protective factors and modulators of aggression (Jiménez and Estévez, 2017; Lucas-Molina et al., 2020), being considered as necessary tools for an adequate coexistence (Extremera et al., 2019; Ruvalcaba et al., 2017).

Emotional understanding and its relationship to aggression

Emotional understanding (EQ) is one of the essential skills for moving from aggressive to prosocial ways of relating to others, as a premise for the development of other aspects of a socioemotional nature (García-Mera et al., 2022). Discerning and understanding one's own and others' emotions is a key element that facilitates a more adjusted interaction in social contexts. In addition, it favours the communication of one's own emotional states and greater control over their expression (Roazzi et al., 2013; Lucas-Molina et al., 2020).

Some studies have identified certain particularities that aggressive creatures present in terms of their understanding of emotions. Sánchez-Pérez and González-Salinas (2021) describe that they are less able to identify emotions, understand their causes and consequences. Laurent et al. (2020) found differences between aggressive and non-aggressive preschoolers on these dimensions. Ensink et al. (2017) recognised in these children certain information processing styles that bias emotional understanding, mainly a greater tendency to attribute hostile intentions to neutral or ambiguous behaviour.

In this sense, associations have been established between both variables (Castro et al., 2018; Laurent et al., 2020), emphasising the influence of other mediating variables affected in aggressive behaviour, in which emotional understanding has a positive influence, such as: emotional regulation, interpersonal relationships, and prosocial behaviours (García-Sancho et al., 2014; Tur Porcar et al., 2021).

In the same vein, people who are able to understand emotions and put themselves in the place of others are less aggressive because of their emotional sensitivity and the possibility of understanding the potential negative consequences that can result from aggression (Cuello and Oros, 2013). Therefore, this construct appears negatively related to aggressive behaviour (although it is not observed in the same way in aggressive behaviours that include bullying, see Wang et al., 2023), and positively related to prosocial behaviour (García-Sancho et al., 2016).

In addition, authors such as Denham (2019) and Beckmann (2020) have shown that young children who lack emotional awareness tend to have difficulties in regulating the expression of emotions. The success in using regulation strategies that allow modifying or attenuating the emotional response, such as behavioural or cognitive distraction, is closely linked to the knowledge of oneself and the emotions experienced in each situation (Lucas-Molina et al., 2020). All of this can have a negative effect on their social competence, so it is presumed that this is a key tool for building positive interpersonal bonds (Cuadros and Berger, 2022).

While evidence shows a relationship between EQ and aggression (Ensink et al., 2017; Roos et al., 2016) and suggests that EQ may facilitate better social functioning and be a protective factor against aggression, the latter needs to be further elaborated by focusing on particular types of aggression and highlighting the specific dimensions of EQ that show the strongest link.

The model constructed by Pons, Harris, and De Rosnay (2004) is very interesting for the approach to this construct. Their model includes nine indicators grouped into three dimensions according to their levels of development and complexity (External Level: understanding of emotions based on expression, causes and desires; Mental Level: understanding based on memories, beliefs and the possibility of simulating emotions; Reflective Level: understanding of mixed emotions, moral emotions and identification of strategies for their regulation) (Pons and Harris, 2019) (Pons and Harris, 2019).

In terms of subtypes of aggression, one of the most commonly used classifications distinguishes between more direct manifestations (physical or verbal) and those of a relational nature such as exclusion or interference in the social ties of others (Heredia-García and Zapata-Zurita, 2022). It has also been highlighted the importance of considering not only differences in terms of their form of presentation, but also based on their functionality, revealing differences between reactive aggression and proactive aggression (carried out for instrumental purposes) (Little et al., 2003; Socastro-Gómez and Jiménez, 2019). Thus, different subtypes of aggression can be identified based on the combination of these dimensions, which may have different implications for the development of child adjustment problems, given the biological and psychological mechanisms underlying each of them (González-Peña et al., 2013).

From neuropsychological studies, it has also been determined (as in Alcázar et al., 2010) that people with proactive aggression show better frontal lobe functioning than people with reactive aggression. The latter show lower frontal lobe functioning, which explains why they are more emotional and have less inhibitory control, poor cognition and emotional mastery. Roos et al. (2016) found that difficulties in identifying and regulating anger modulate the relationship between aggressive thoughts and the development of aggressive behaviour itself. In contrast, proactive aggression does not have a clear relationship with emotion management. Several studies have linked it to a certain affective coldness and, above all, to an absence of compassion for the victim (Gutiérrez de May, 2012; Juárez-Romero, 2019; Noorden et al., 2015).

The above elements are considered key factors to consider in the design of intervention alternatives in this regard. However, there is little evidence of an association between aggression and emotional understanding considering these distinctions. Furthermore, the need to explore this relationship considering different aspects or dimensions of EQ is highlighted, as there are some dimensions of the construct whose link with aggressive behaviour has been insufficiently addressed.

Objectives

In the present article, therefore, we propose to determine the main differences between children with aggressive manifestations (CMA) and those without aggressive manifestations (SMA) in terms of their emotional understanding, as well as the existing

relationships between the indicators that make up emotional understanding and the different forms of aggression (according to their manifestation and functionality).

Method

The research was carried out using a descriptive-correlational study and a non-experimental, cross-sectional design.

Population and Sample

We worked with a sample of children from the cities of Santa Clara, Camagüey and Cienfuegos reported as aggressive by their respective educational institutions, during the 2018-2019 academic year. These individuals were located as non-compliant with preventive indicator number 4 established by the Cuban Ministry of Education (MINED), in accordance with Ministerial Resolution 111/2017 (Ministry of Education, 2017), which refers to behavioural problems, fundamentally aggressive manifestations. The population of students in this condition, whose ages were between 8 and 10 years old, was 79 (29 in Santa Clara, 40 in the city of Camagüey and 10 in the city of Cienfuegos). We worked with all the cases in which the guardians, fathers and mothers expressed their willingness to participate by means of informed consent. Exclusion criteria were considered to be the presence of organic affectation or externalising psychological disorder already diagnosed, and that they had not remained for a period of more than 6 months in the indicator.

In total, the sample consisted of 51 boys and girls with aggressive manifestations (Age: $M= 9.10$, $SD= .885$), as shown in table 1. We also worked with a matched sample of 51 people without such manifestations, with the intention that their socio-demographic characteristics should be the same as those of the study group. The latter were selected on the basis of the criteria of the teachers and educational psychologists of the schools, taking into account that they were in the same classrooms and did not display aggressive behaviour.

Table 1.

Socio-demographic distribution of the sample

Variables	Children with aggressive manifestations		
	N	%	
Sex	Female	5	9,8
	Male	46	90,2
Age	8	17	33,3
	9	11	21,6
	10	23	45,1
Grade	2nd	6	11,8
	3rd	13	25,5
	4th	15	29,4
	5th	17	33,3
Municipality/	Santa Clara, Villa Clara	20	39,2

Province	Camagüey,	25	49,0
	Cienfuegos	6	11,8

Source: School File

Instruments

Test of Emotion Comprehension (TEC). It was created by Pons, Harris and de Rosnay (2004), with the aim of exploring the level of understanding of emotions in children between 3 and 12 years old. It is composed of different sets of stories. Below each scene, four faces with facial expressions representing different emotional states are presented. After listening to each story, the child is asked to make an emotional attribution to the main character by pointing out the most appropriate one. The test is divided into 9 blocks presented in a pre-established order. Each block assesses a particular component of emotion understanding: recognition of emotions based on facial expression, understanding of external causes of emotions, understanding of desire-based emotions, understanding of belief-based emotions, understanding of the influence of a memory on a present emotional state, understanding of the possibility of regulating an experienced emotion, understanding of the control of emotional expression, understanding of mixed emotions and understanding of moral emotions. These components are in turn grouped into three dimensions or levels: external (components 1,2,3), mental (components 4,5,7) and reflective (6,8,9). A point is assigned to each component to which the child responds correctly. In the validation for the Cuban population, adequate goodness-of-fit indices were found for the model proposed by the authors [$\chi^2=28.566$ ($gl=24$), $p=.237$; $\chi^2/gl= 1.190$; $GFI=.969$; $AGF=.934$; $CFI=.909$, $LTI=.863$; $RMSEA=.031$], as well as a high reliability yielded through the test-retest method [$r(200) = .889$, $p < .001$] (Angulo Gallo et al., 2018).

Aggression Scale. It was developed by Little et al. (2003). It has been translated into Spanish and adapted to various contexts. In the present study we used the version adapted to the Argentine population (Cuello and Oros, 2013). Its aim is to identify the manifestations of aggression according to its form (direct and relational) and function (reactive and proactive). It has 22 items whose responses are given on a Likert-type scale (1 = no; 2 = sometimes; 3 = yes). To obtain an overall index of aggression, all scores are added together and if a separate value for each type of aggression is desired, the items corresponding to each type of aggression are added together. In the validation for the Cuban childhood population, a model with a 4-factor structure (reactive-direct, proactive-direct, reactive-relational, proactive-relational aggression) was established with satisfactory goodness-of-fit indices ($\chi^2/gl= 1.952$; $GFI=.928$; $CFI=.959$, $LTI=.947$; $NFI=.921$; $RMSEA=.060$) and excellent internal consistency (Cronbach's $\alpha = .904$) (Angulo Gallo et al., 2022).

Data collection and analysis procedure

In order to carry out the study, consent was formally requested from the Provincial Directorate of Education to work in those schools with the highest incidence of the problem of child aggression. The starting point was a review of the teachers' files, as well as an interview with professionals from each centre, which allowed for the selection of the

sample. The selected psychological tests were then applied in 2 work sessions with the children. Subsequently, a semi-structured interview was carried out with the aim of deepening the information gathered about the dimensions of emotional understanding.

Quantitative data analysis. Descriptive data analysis was performed, as well as tests for comparison between groups of independent samples (Student's t-test) and correlations between variables (Pearson correlation). In addition, decision trees with the CHAID (*Chi-square Automatic Interaction Detector*) technique were used to detect non-linear interactions between emotional understanding and aggression. Analyses were performed with the SPSS 21.0 statistical package.

Qualitative data analysis. The Content Analysis method was used to analyse the information obtained from the qualitative interviews. This process was carried out in ATLAS.ti version 7.5.4. After coding the qualitative information, several categories and subcategories of analysis were identified, which were subsequently quantified and presented in tables with data matrices for better visualisation.

Results

Comparison between childhood with and without aggressive manifestations

In terms of levels of aggressiveness, significant differences were found between the groups, both in general ($t(100) = -10.622$; $p < .001$; SMA: $M = 18.67$, $SD = 3.096$; CMA: $M = 26.22$, $SD = 4.022$), and in most of its variants: direct reactive ($t(100) = -9.901$; $p < .001$; SMA: $M = 5.10$, $SD = 1.253$; CMA: $M = 8.59$, $SD = 1.183$), direct proactive ($t(100) = -7.376$; $p < .001$; SMA: $M = 4.59$, $SD = .779$; CMA: $M = 6.75$, $SD = 1.937$) and relational reactive ($t(100) = -6.299$; $p < .001$; SMA: $M = 4.14$, $SD = 1.096$; CMA: $M = 5.41$, $SD = .942$). In relation to aggression in general, it was found that in children with aggressive manifestations, the medium (56.9 %) and high (43.1 %) levels predominated, while in the others, the low level (66.7 %) prevailed. The differences were less significant in proactive relational aggression ($t(100) = -2.169$; $p = .016$; SMA: $M = 4.84$, $SD = 1.007$; CMA: $M = 5.97$, $SD = 1.804$), in which in both groups the low (SMA=78.4 %; CMA=21.6 %) and medium (SMA=21.6 %; CMA=37.2 %;) levels predominate.

The results obtained in the ECT were significantly different between the groups (see Table 2), specifically in the reflective and mental level, as well as in the overall score. Children with aggressive displays scored lower than their age peers on each of these aspects. Only on the external level were no significant differences found, as these were acquisitions that had to be incorporated at earlier stages of development. However, it is noteworthy that in childhood without manifestations of aggression, none obtained low scores of 0 or 1, which distinguishes them from their counterparts in which 9 cases were found in this condition.

In both groups there were fewer difficulties on the external level, greater difficulties on the reflective level, and the scores were quite similar in terms of understanding the emotional simulation or the possibility of controlling its expression. In addition, it should be noted that the recognition of mixed emotions was an affected element in all children,

although in those with aggressive manifestations it was significantly higher. The only indicator where children with aggressive displays showed superior results in comparison with their age peers was the understanding of the influence of memories on present emotions.

Table 2.

Comparison of indicators and levels of emotional understanding .

Levels and indicators of emotional understanding	Childhood with Aggressive Manifestations (CMA)		Childhood without Aggressive Manifestations (SMA)		t	p
	Media	Typ. dev.	Media	Typ. dev.		
Understanding of expression	.80	.401	.94	.238	-2.103	.019
Understanding the causes	.67	.476	.86	.348	-2.376	.010
Desire	.75	.440	.98	.140	-3.638	<.001
Belief	.61	.493	.98	.140	-5.190	<.001
I remember	.86	.348	.69	.486	3.667	<.001
Regulation	.16	.367	.80	.428	-8.498	<.001
Control of expression	.73	.451	.63	.488	1.054	.147
Mixed emotions	.29	.460	.53	.505	-2.462	.008
Moral emotions	.69	.469	.96	.196	-3.859	<.001
External Level	2.33	.887	2.49	.707	-.551	.292
Mental Level	2.08	.872	2.59	.536	-3.948	<.001
Reflective Level	1.14	.821	2.29	.730	-8.009	<.001
Emotional understanding	5.55	1.47	7.29	1.591	-6.717	<.001

Source: Test of Emotional Understanding (TEC)

Among the indicators with significant differences is the understanding of emotional regulation strategies, in which children with aggressive manifestations showed the greatest difficulties. A qualitative analysis of the main differences identified in the psychological interview in this respect was carried out.

As shown in Table 3, in children with aggressive manifestations, dysregulation predominates, which is evidenced by the use of uncontrolled and aggressive behaviours or the absence of actions to modify their unpleasant emotions. In schoolchildren without a tendency towards aggression, isolation or avoidance of situations that generate discomfort prevails, as well as the search for affection or support. A strategy identified by both groups was behavioural distraction, as some of them carried out pleasant actions that allowed them to forget about the problematic situation that generated the emotional discomfort.

Both behavioural and cognitive distraction were used more in anxiety- and sadness-generating situations than in situations where the person feels angry. In the latter, even children who were not prone to aggression used less adaptive responses such as avoidance and isolation.

Table 3.

Comparison of emotional regulation strategies .

Strategy	Gross data	Frequency (%)	
		CMA	SMA
Isolation/ Avoidance	I go to bed for a while" / "I lock myself in the room" / "I go to bed for a while" / "I go to bed for a while" / "I lock myself in the room". I try to get away from what makes me sad" / "I try to get away from what makes me sad" / "I try to get away from what makes me sad" / "I'm running away" / "I'm getting out of there" / "I'm getting on the roof" / "I'm not talking to anyone until I get over it".	15(29.4)	12 (23.5)
Behavioural distraction	"I do something I like" / "I play with my friends" / "I leave the house to play" / "I watch TV" / "I go to the park" / "I play" / "I draw" / "I play" / "I entertain myself" / "I take the tablet, I forget everything".	11 (21.6)	14 (27.4)
Cognitive distraction	I think of something nice" / "I think of something else" / "I think of good things" / "I think of good things" / "I think of something else" / "I think of good things".	3 (5.9)	9 (17.6)
Dysregulation	I'm waiting for it to pass" / "nothing" / "I'll stay like this" / "I'm waiting for it to pass" / "nothing" / "I'll stay like this". "sometimes I play, sometimes I don't".	12 (23.5)	5 (9.8)
Search for affection	"I hug my mum" / "I tell my grandmother to play with me" / "I tell my parents what is happening to me".	2 (0.4)	11 (21.6)
Dysregulation, with use of aggressive behaviours	I shout" / "I bang on the wall" / "I throw something" / "I throw something" / "I throw something" / "I throw something". "I'll fuck anyone who annoys me" / "I'll break anything I can get my hands on".	18 (35.3)	0 (0)

Source: Semi-structured psychological interview

Relationship between emotional understanding and aggressive manifestations

Table 4 presents the correlation coefficients between the variables. The highest correlations were established for aggression in general and for the reactive-direct subtype. All children with difficulties in EQ presented a high level of this type of aggression, while those with optimal EQ presented a fundamentally low level of this type of aggression. Most of the non-significant correlations were established with proactive-relational aggression. The most strongly correlated levels and indicators of emotional understanding with respect to aggression were: beliefs, understanding of emotional regulation, reflective level, and general emotional understanding.

The strongest correlation identified between the different forms of aggression was between direct proactive and reactive aggression ($r = .565$; $p < .001$). Moderate correlations were found between direct reactive and relational aggression ($r = .464$; $p < .001$), as well as reactive and direct proactive relational aggression. The correlation between direct proactive and relational proactive aggression was also significant ($r = .399$; $p < .001$). In contrast, the latter did not correlate with reactive forms of aggression, both direct ($r = .184$; $p = .062$) and relational ($r = .175$; $p = .078$).

Table 4.

Correlations between forms of aggression and indicators of emotional understanding.

Variable	Total aggressiveness	Reactive relational aggression	Direct reactive aggression	Proactive direct aggression	Proactive relational aggression
Emotional expression	-.234	-.195	-.226	-.280	.060
Sig. (bilateral)	.018*	.050*	.023*	.004*	.547
Causes	-.006	-.085	.161	-.165	-.019
Sig. (bilateral)	.950	.394	.107	.097	.847
Wishes	-.153	-.147	-.289	-.136	.235
Sig. (bilateral)	.125	.141	.003*	.173	.018*
Beliefs	-.481	-.238	-.501	-.347	-.225
Sig. (bilateral)	<.001*	.016*	<.001*	<.001*	.023*
Memories	.076	.148	.089	-.083	.097
Sig. (bilateral)	.450	.137	.372	.407	.330
Regulatory strategies	-.498	-.295	-.525	-.407	-.128
Sig. (bilateral)	<.001*	.003*	<.001*	<.001*	.198
Simulation	.018	.045	.125	-.035	-.139
Sig. (bilateral)	.854	.654	.210	.730	.163
Mixed	-.386	-.275	-.437	-.241	-.102
Sig. (bilateral)	<.001*	.005*	<.001*	.015*	.307
Moral	-.293	-.302	-.392	-.071	-.038
Sig. (bilateral)	.003*	.002*	<.001*	.480	.706
External Level	-.095	-.085	.000	-.290	.093
Sig. (bilateral)	.343	.393	.998	.003	.351
Mental Level	-.340	-.183	-.343	-.294	-.106
Sig. (bilateral)	<.001*	.065	<.001*	.003*	.291
Reflective Level	-.602	-.438	-.686	-.375	-.145
Sig. (bilateral)	<.001*	<.001*	<.001*	<.001*	.146
Emotional Understanding	-.549	-.378	-.558	-.482	-.091
Sig. (bilateral)	<.001*	<.001*	<.001*	<.001*	.361

Note: * $p < .05$

In the predictor tree illustrated in figure 1, the interactions between the indicators addressed were explored in depth, where no variable was forced. At the root node (0) is the dependent variable of the model, which in this case corresponds to the total number

of people in the sample, according to the group to which they belong (CMA and SMA). The aforementioned variable branches into three nodes (1, 2 and 3), according to the results corresponding to the emotional understanding that they generally possess. This constitutes the main associated variable, where a differentiation is established between people who obtained more than 6 points in the ECT (node 3), between 5 and 6 points (node 2), and less than 5 (node 1).

The other variables that made up the tree were: the understanding of the possibility of regulating an emotion, the results obtained at the reflective level, the frequency with which anger is manifested, and the understanding of emotional simulation. When analysing the terminal nodes of the tree in detail, it is possible to find some profiles, in terms of the particularities of these indicators in childhood, which are linked to aggressive behaviour.

In node 1 were located those who presented the greatest difficulties in emotional understanding in general, 100 % (20) belonged to the CMA group, which shows the association between these variables. In node 4 were located those with aggressive manifestations (21) who presented scores between 5 and 6 in the ECT. Their most distinctive problem is associated with their ability to regulate their emotions and to recognise the strategies they can use to do so. This indicator distinguishes them from their SMA age peers with similar EQ scores (node 5).

Node 3 shows that there are 10 participants with aggressive displays who scored more than 6 on the ECT. Five (representing 100 % of node 7) differ from the group without aggressive displays by the high frequency with which they experience anger. The rest are distinguished by the presence of difficulties in the reflective level of the EQ (node 10). In contrast, the majority of SMA participants (19) were grouped in node 11, where those who do not have difficulties in emotional understanding in general, nor in the reflective level, as well as not experiencing anger frequently, were located.

The established model correctly classified 88.2% of participants overall. Specifically, it can be argued that it offers a higher "correctness" in the case of CMA, where 90.2% of participants were correctly classified. In SMA the percentage correct classification was 86.3%, which is also high.

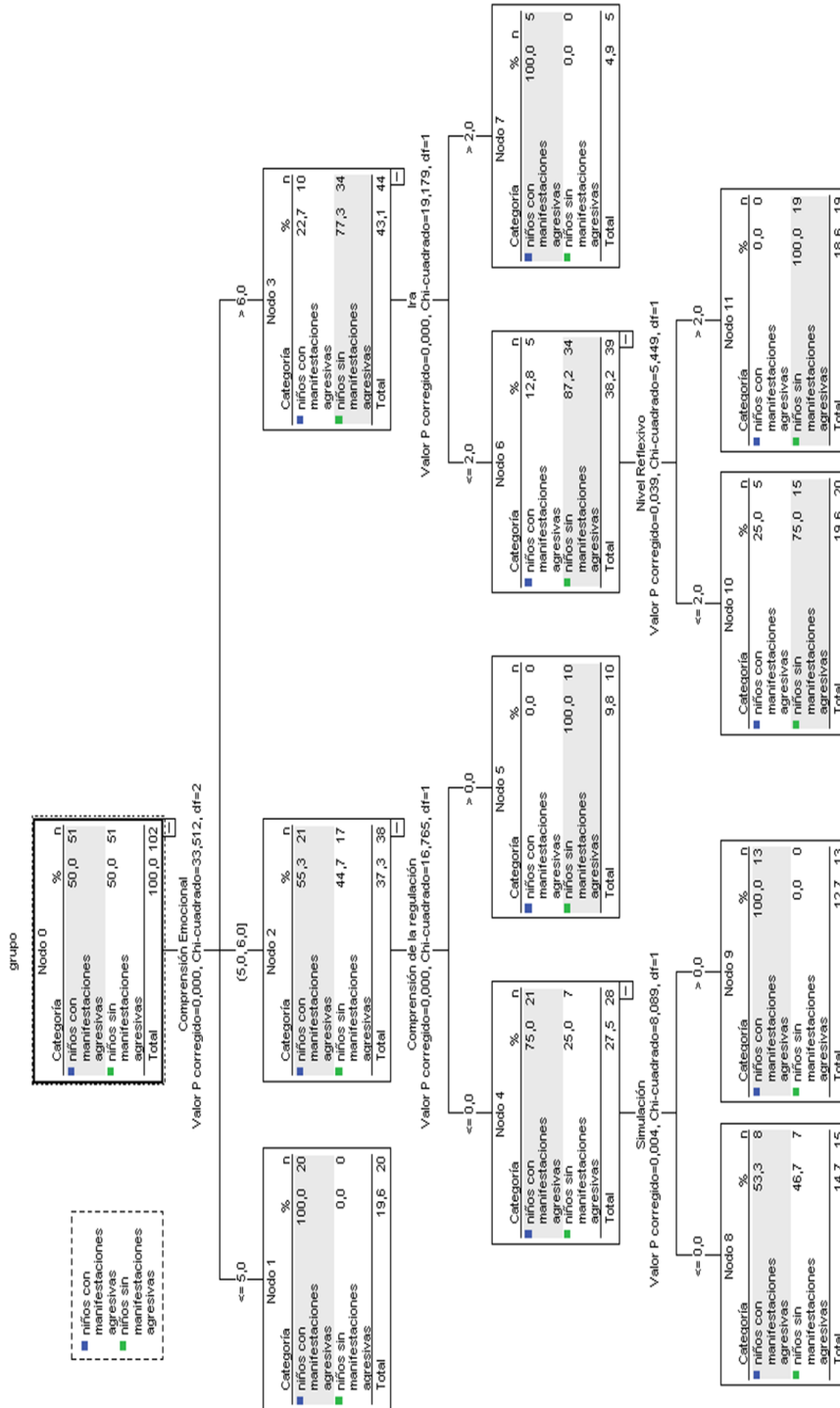


Figure 1. CHAI results showing the interaction between the variables emotional understanding and aggression.

Discussion

From the results of the study it was possible to verify the relationship between the development of emotional understanding in childhood and its manifestations of aggression in general, being more evident with respect to the reactive-direct variant.

High levels of this variant of aggression predominated in those with greater difficulties in EQ. However, research on the development of childhood aggression by Tremblay (2005) and Pingault et al. (2017) suggests that these forms of aggression decrease during the school years. The latter is congruent with the data obtained in the sample of children without aggressive manifestations, where relational aggression is more common, but in a moderate form. This allows us to suppose the existence of a certain pattern of chronicity of this behaviour in the participants who present aggressive manifestations. In the aforementioned studies, there are also notable differences between girls and boys in terms of aggressive manifestations, where physical aggression is more attributable to the male sex. In the study sample it was not possible to make comparisons in this respect, due to the low incidence of girls reported by MINED in the preventive work indicator with which we worked. This should be analysed considering for example possible biases in the indicator itself.

As in other research (Alimoradi et al., 2014; García-Sancho et al., 2014; Laurent et al., 2020; Martínez-Monteaquedo et al., 2019), the link between the understanding and mastery of strategies for controlling emotions and aggressiveness is confirmed, fundamentally with the reactive-direct variant, in line with previous studies (Deffenbacher, 2016; Taylor et al., 2013; Tur Porcar et al., 2021). Within the EC indicators, the identification of emotional regulation strategies was where the greatest differences existed with children who do not have a tendency towards aggressive behaviour. This favours impulsive behaviour (García-Sancho et al., 2016; Losada et al., 2020). Thus, interventions aimed at reducing this type of aggression could be more effective if they are oriented towards favouring the development of emotional regulation rather than focusing directly on aggressive behaviour.

The results in emotional understanding in general showed better results in those components of the external level with respect to those of the reflective level of understanding, as indicated by the theoretical-methodological model set out by Pons and Harris (2019). In various studies in which this model has been empirically validated (Grazzani et al., 2020; Roazzi et al., 2013; Rocha et al., 2015), its hierarchical structure has been contrasted, as it has been shown that the skills of the external level begin to manifest themselves at earlier ages (1-3 years), while those of the mental level emerge approximately in the pre-school stage and those of the reflective level are more complex and become more structured between the ages of 7 and 12. From this analysis, it can be explained that no significant differences were observed in the external level between the groups in general, as this includes acquisitions that should have been achieved in previous stages of their development (Pons et al., 2014). Furthermore, the support of these results for the model of Pons and Harris (2019) emphasises the relevance of targeting interventions that favour the different levels (external, mental and reflective) at specific ages and levels.

However, the distinctions with participants without manifestations of aggression in most of the indicators, mainly those included in the mental and reflective levels, reveal the

deficiencies in the development of their emotional understanding. One of the least developed indicators in childhood in both groups, although differences were observed between them, was the identification of mixed emotions, which is natural as it is one of the most complex skills under formation at this stage (Burkitt et al., 2019).

Of all the components, only in the understanding of emotional simulation were the results not significantly different. This could be due to the fact that parents and guardians encourage people with aggressive displays to hide their emotions, especially those that are not socially accepted. It was also interesting that the only indicator with better results, compared to those without aggressive displays, was the understanding of the influence of memories on emotions, probably associated with the high emotional impact of some situations in their past life. Both hypotheses should be tested in future research.

The information obtained on the variants of aggression and their links with the emotional understanding of the participants is considered to be of great value for the planning of preventive actions and interventions aimed at this problem, particularly at school level. The limitations of the study are acknowledged, given the small sample size, and it should be extended to more representative and diverse samples. Furthermore, it would be feasible to go deeper into the subject using analyses and methodologies with a more explanatory scope, where data and sources are triangulated to provide evidence from different angles. Nevertheless, the study opens doors to research on aggressive behaviour in childhood and socioemotional competencies by highlighting the need for differential analysis in this regard.

Conclusions

The children with aggressive manifestations studied are characterised by difficulties in emotional understanding. The differences with those who did not present aggressive manifestations were notable in practically all indicators. Emotional understanding proved to be related to the manifestations of aggression in general, being more evident with respect to the reactive-direct variant. School interventions aimed at reducing aggression should consider these distinctions, focusing on dimensions of emotional understanding.

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