

Original Article

## Social Skills and Bullying and their Association with Suicidal Behavior in Adolescents with Autism Spectrum Disorder (ASD): A Pilot Study

Carla Figueroa Saavedra <sup>a, b, \*</sup>, Claudia Guajardo Sáez <sup>a</sup>, Virginia Guillén Cañas <sup>b</sup>, Michelle Vitali Andana <sup>a</sup>, Cyntia Lagos Cid <sup>a</sup>, Sebastián Huentemil Collin <sup>a</sup> & Valentina Rifo Riquelme <sup>a</sup>

<sup>a</sup> Facultad de Ciencias de la Salud, Carrera de Fonoaudiología, Universidad Autónoma de Chile, Chile.

<sup>b</sup> Departamento de Neurociencias, Facultad de Medicina y Enfermería, Universidad del País Vasco (UPV/EHU), España.

### ABSTRACT

Evidence suggests that Autism Spectrum Disorder (ASD) may be associated with an increased risk of suicidal ideation. In light of this situation, it becomes necessary to investigate whether social skills and bullying are factors that influence suicidal behavior. Therefore, this research explores the association between the state of social skills and experiences of bullying, and the degree of suicidal ideation in high-functioning adolescents with ASD. A pilot study was conducted with the participation of 24 high-functioning adolescents with ASD aged between 11 and 18 years. The instruments used for assessment included 1) the Okasha Scale, 2) the Aggression/Victimization Scale, and 3) the Adolescent Multidimensional Social Competence Questionnaire (AMSC-Q). Data analysis involved descriptive statistics and correlation analysis using the Spearman correlation coefficient. The results revealed an association between the level of suicidal ideation, bullying ( $r_s 0.73$ ;  $p < 0.05$ ), and specific dimensions of social skills: cognitive reappraisal ( $r_s -0.44$ ;  $p < 0.05$ ), normative adjustment ( $r_s -0.659$ ;  $p < 0.05$ ), and social efficacy ( $r_s -0.45$ ;  $p < 0.05$ ). It is concluded that there is a correlation between bullying and the degree of suicidal ideation. Additionally, it is observed that some dimensions of social competence are associated with suicidal ideation in the population of adolescents with ASD.

### Keywords:

Autism Spectrum Disorder; Self-Injurious Behavior; Suicidal Ideation; Bullying; Social Skills

## Competencias sociales y bullying en adolescentes con Trastorno del Espectro Autista y su asociación con la conducta suicida: Un estudio piloto

### RESUMEN

La evidencia plantea que el Trastorno del Espectro Autista (TEA) puede estar asociado a un aumento en la ideación suicida. Ante esta situación se hace necesario estudiar si las competencias sociales y el bullying son factores que afectan a la conducta suicida. Por ello, en esta investigación se explora la asociación del estado de las competencias sociales y las experiencias de bullying con el nivel de ideación suicida en adolescentes con TEA de alto funcionamiento. Se realizó un estudio piloto en el que participaron 24 adolescentes con TEA de alto funcionamiento, cuyas edades fluctuaban entre los 11 y los 18 años. Los instrumentos de evaluación fueron: 1) Escala de Okasha, 2) Escalas de agresión y de victimización y 3) Cuestionario multidimensional de competencia social para adolescentes (AMSC-Q). En el análisis de los datos se consideró la estadística descriptiva y de correlación mediante el coeficiente de correlación de Spearman. Los resultados mostraron una asociación entre el nivel de ideación suicida, el bullying ( $r_s 0,73$ ;  $p < 0,05$ ) y algunas dimensiones de la competencia social: reevaluación cognitiva ( $r_s -0,44$ ;  $p < 0,05$ ), ajuste normativo ( $r_s -0,659$ ;  $p < 0,05$ ) y eficacia social ( $r_s -0,45$ ;  $p < 0,05$ ). Se concluye que existe una correlación entre bullying y nivel de ideación suicida. Además, se observa que algunas dimensiones de la competencia social están asociadas a la ideación suicida en la población de adolescentes con TEA.

### Palabras clave:

Trastorno del Espectro Autista; Prevención del Suicidio; Ideación Suicida; Acoso Escolar; Habilidades Sociales

\*Corresponding Author: Carla Figueroa Saavedra  
Email: [carla.figueroa@uautonoma.cl](mailto:carla.figueroa@uautonoma.cl)

Received: 12-27-2022  
Accepted: 11-08-2023  
Published: 11-23-2023

## INTRODUCTION

The concept of suicide includes suicidal ideation, suicide attempts, and completion of suicide. This phenomenon represents a significant global health concern in adults and adolescents (Chu et al., 2017). According to the World Health Organization [WHO] (2021), approximately 700,000 individuals decide to end their lives each year, which equals a rate of 11.4 deaths per 100,000 inhabitants. Additionally, the United Nations International Children's Emergency Fund [UNICEF] (2017) reports that suicide is the fourth leading cause of mortality among young people aged 15 to 29. In Chile, in the year 2020, there were 1,315 suicides (*Departamento de Estadísticas e Información de Salud [DEIS]*, 2022). Moreover, more than 220,000 Chileans aged 18 and above have contemplated suicide (Chilean Ministry of Health [MINSAL], 2019) and over 100,000 acknowledge they have attempted to take their own lives (*Subsecretaría de Salud Pública*, 2017). Regarding emergency cases recorded by the Department of Statistics and Health Information (*Departamento de Estadísticas e Información en Salud [DEIS]*) in 2022, there were 16,235 individuals with intentionally self-inflicted injuries or experienced suicidal ideation (DEIS, 2023).

There is evidence at an international level that groups with Special Educational Needs (SEN) are more vulnerable to suicide, particularly individuals with Autism Spectrum Disorder (ASD) (Ruggieri, 2020).

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by persistent deficits in social communication and the presence of restrictive and repetitive patterns of behavior, interests, or activities. These characteristics significantly impact the individual's life and manifest in various contexts (American Psychiatric Association [APA], 2013). Between the years 2012 and 2021, the prevalence of autism at a global level was estimated to vary across regions, with a median prevalence of 100/10,000 (range: 1.09/10,000 to 436.0/10,000), and a male-to-female ratio of 4:2 (Zeidan et al., 2022). Other studies suggest that the prevalence in Latin America ranges from 1% to 1.5% (Fajardo et al., 2021). However, these figures are only estimates for the prevalence of autism in Latin America. In Chile, there is a lack of research on the prevalence of this disorder, although a study conducted in two urban communes in the Metropolitan Region showed a prevalence of 1.96%, i.e., 1 in 51 children, with a gender distribution of 4 boys to 1 girl (Yáñez et al., 2021).

The DSM-5 has unified four subtypes (autistic disorder, Asperger's syndrome, childhood disintegrative disorder, and

unspecified pervasive developmental disorder) into the general category of ASD. It also proposes that variability in autism is expressed through three levels of support that may be required by individuals. Level 3 implies severe difficulties in both verbal and nonverbal communication, leading to significant impairments in functioning. Individuals in level 3 also display inflexibility and extreme difficulty coping with changes, which noticeably interferes with functioning in all aspects of their lives. Level 2 includes individuals with limited skills in verbal and nonverbal communication, which impacts their social domain. It is characterized by limited initiation of social interactions and sparse or abnormal responses to social cues. Lastly, individuals at Level 1 show difficulties in social communication, marked by initiating social interactions with atypical and unsatisfactory responses. They also exhibit inflexible behavior, causing significant interference in various contexts of their life (APA, 2013).

There is a limited body of research exploring suicidal behavior in the population of children and adolescents with ASD (Cassidy et al., 2022; Hedley et al., 2021; La Buissonnière et al., 2022; Matthias et al., 2021). Despite the insufficient literature available, there is evidence of certain aspects of suicidal behavior in individuals with ASD. It has been observed that individuals with ASD have a higher prevalence of suicidal tendencies compared to those with typical development (Blanchard et al., 2021; Costa et al., 2020).

A noteworthy fact is the documented relationship between intellectual quotient (IQ) and the presence of suicidal thoughts in the autistic population (Casten et al., 2023). This evidence suggests that higher cognitive capacity is associated with increased suicidal thoughts in children with autism, and highlights that, while individuals with autism face a higher general risk of suicidal thoughts, this notably increases in individuals with exceptionally high intellectual quotients. On the other hand, various factors that can trigger suicidal behavior have been identified. One such factor is bullying, defined as a form of intentional aggression involving verbal, physical, or psychological acts that occur repeatedly, systematically, over time, and in relationships with others. Bullying is considered one of the most destructive practices for children in school settings (Ambiado-Lillo et al., 2022; Olweus, 1998). Accordingly, several studies indicate that Special Educational Needs (SEN) and communication disorders are conditions of high vulnerability and significant predictors of direct involvement in bullying (Ambiado-Lillo et al., 2022; Blood & Blood, 2004; Knox & Conti-Ramsden, 2003; Little, 2001; van Roekel et al., 2010). In this regard, Lung et al. (2019) assert that adolescents diagnosed with ASD and Intellectual Disability report a higher rate of

experiences of bullying compared to those without a diagnosis. In line with this, children with ASD are bullied more frequently by their peers than other classmates, leading to a negative impact on academic functioning and mental health symptoms, including an increased risk of suicide (Park et al., 2020).

Another triggering factor for suicide is social behavior, defined as the use of skills in social interactions to achieve personal goals in different contexts (Gómez-Ortiz et al., 2019). According to Gómez-Ortiz et al. (2017), social behavior comprises five dimensions: cognitive reappraisal (strategies for emotional regulation), social adjustment (the degree to which a person engages in socially competent behaviors), prosocial behavior (offering help or comfort to others), social efficacy (individual perception of efficacy in social interaction), and normative adjustment (adherence to social norms in the educational context).

The available evidence shows that individuals with symptoms of Autism Spectrum Disorder (ASD) and difficulties in their social skills are at a higher risk of suicide (Smith et al., 2023). Accordingly, the need to train social skills has been recognized, as they are linked to suicidal behavior in individuals with ASD (*Sociedad de Psiquiatría y Neurología de la infancia y adolescencia* [SOPNIA], 2017). Additionally, deficiencies in social communication and difficulties in establishing interpersonal relationships are also triggers for suicidal behavior (Echeburúa, 2015).

Due to the limited literature and the need to generate knowledge in this area, this research aims to explore the association between the state of social competencies and experiences of bullying, and the degree of suicidal ideation in adolescents with high-functioning ASD. The research questions are: What are the social skills and experiences of bullying in adolescents with high-functioning ASD? What is the level of suicidal ideation in adolescents with high-functioning ASD? Is there a correlation between social skills, experiences of bullying, and the degree of suicidal ideation in adolescents with high-functioning ASD? Finally, the proposed hypothesis is: Experiences of bullying and performance in social skills are related to suicidal ideation in adolescents with high-functioning ASD.

## METHODOLOGY

### Design

This is a cross-sectional pilot study that considered experiences of bullying, social skills, and degree of suicidal ideation as research variables.

### Participants

The sample consisted of 24 adolescents (21 males and 3 females) with high-functioning Autism Spectrum Disorder (ASD), with an average age of 13 years and 8 months. All participants were from the district of Temuco.

Individuals with high-functioning ASD are at the less affected end of the spectrum, exhibiting higher functionality or capability. Their symptoms are less pronounced, allowing for learning and development closer to the parameters of normality (APA, 2013).

The sampling method was intentional, non-probabilistic, and based on typical cases. Two inclusion criteria were applied: a) having Chilean nationality and b) a medical diagnosis of ASD, assessed through a comprehensive clinical evaluation by medicine, duly certified by a medical certificate. The exclusion criteria were: a) having intellectual disability, b) bipolar disorder, c) obsessive-compulsive disorder, d) lacking a diagnosis or not having a medical certificate, and e) not falling within Level 1, as per DSM-5 criteria. An anamnesis was conducted to ensure compliance with the inclusion and exclusion criteria.

### Instruments

The risk of suicide was assessed using the Suicide Risk Assessment Scale (Okasha et al., 1981). This scale is validated in Chile and has a reliability of 0.89, sensitivity of 90%, and specificity of 79% (Salvo et al., 2009). It consists of four items, the first three exploring suicidal ideation, and the fourth inquiring about suicide attempts. Each item is scored from 0 to 3 points; therefore, the total score can range from 0 to 12 points. A higher score indicates greater severity.

The experiences of bullying were assessed using self-report scales measuring physical and verbal aggression among schoolchildren. These are the Victimization Scale and Aggression Scale, both validated in Chile. The Victimization Scale has a construct validity of 0.84, and the Aggression Scale has a validity of 0.89 (López & Orpinas, 2012).

Social competence was assessed using the Adolescent Multidimensional Social Competence Questionnaire (AMSC-Q) (Gómez-Ortiz et al., 2017). It consists of 26 items with a Likert scale from 1 to 7 (1= completely false - 7= completely true). The items evaluate five fundamental domains of social competence: prosocial behavior, emotional regulation, perception of social efficacy, social adjustment among peers, and normative adjustment. This scale is validated in Spain, with a convergent validity of 0.70, and reliability measured through Cronbach's

alpha and McDonald's Omega, presenting values equal to or greater than 0.82 in all factors.

### Procedures

Patients, leaders of foundations, and groups of parents with children with ASD were contacted through social media and email. Meetings were held where the detailed application of the instruments was explained to the parents and/or caregivers. It was emphasized that obtaining consent and assent from the minor was essential for their participation in the study. All individuals who agreed to participate in the study were scheduled for a Zoom® interview, where the anamnesis was conducted, and all scales were administered to both parents and their children.

It is important to note that a cutoff score was established based on the Okasha Scale to classify suicide risk and non-risk. The social competence questionnaire and scales measuring bullying were assessed based on the average total score.

### Data Analysis

The results from the three scales were tabulated using Excel and processed using the statistical software SPSS version 21 (IBM Corp., 2012). The data were described through frequency tables, considering the categorical variable item by item. Additionally, the sum of each scale was described considering the continuous quantitative variable, which was presented through median, mean, standard deviation, and range (maximum and minimum scores). The non-parametric Spearman correlation test was chosen to establish linear associations, based on the results obtained in the Shapiro-Wilk normality test. It is crucial to note that the total score of each scale was considered for the correlation analysis, treating the variables as continuous and quantitative. The correlation values were interpreted as follows: a) an r-value between 0.0 and 0.1 indicates no correlation; b) an r-value between 0.1 and 0.3 reflects a low correlation; c) an r-value between 0.3 and 0.5 indicates a moderate correlation; d) a range between 0.5 and 0.7 suggests a high correlation, and e) an r-value greater than 0.7 indicates a very high correlation.

### Ethical Aspects

The research was approved by the ethics committee of the Speech-Language Pathology program at *Universidad Autónoma de Chile* in Temuco. It was assigned the alphanumeric code FONOAU 0073, with approval granted on September 21, 2021.

### Ethical Considerations

This study was approved by the Scientific Ethics Committee of *San Juan de Dios Hospital* on November 25, 2021, with protocol number 106.

### RESULTS

The results of the data analysis are presented here. In terms of distribution, notable differences were observed: while the AMSC-Q and the social adjustment dimension showed a normal distribution, the dimensions of normative adjustment, social self-efficacy, prosocial behavior, and cognitive reappraisal exhibited a non-normal distribution. Similarly, the Okasha Scale and the Aggression and Victimization scales showed a non-parametric distribution.

Regarding the presence of suicidal ideation, it was found that 12.5% of the participants experienced it, presenting risk and unsuccessful attempts. The analysis of the Aggression and Victimization Scales revealed that adolescents with suicidal behavior and experiences of bullying obtained higher scores.

The median obtained from the Aggression and Victimization scales was 17 (interquartile range IQ 79, min 0 - max 79). In the aggression dimension, the median was 10 (IQ 47, min 0 - max 47), and in the victimization dimension, the median was 4.5 (IQ 51, min 0 - max 51). In the AMSC-Q, the median was 131 (IQ 109, min 73, and max 182).

When analyzing the most relevant statements from the Aggression and Victimization scales, the following observations were made. In the statement "I had physical fights because I was angry," 41.7% of adolescents mentioned that they had engaged in physical fights with their peers. In the statement "I was angry most of the day," 70.8% of adolescents mentioned being angry for a significant part of the day. In the statement "A student teased me to make me angry," 54.2% reported being teased and feeling angry. In response to the statement "A student said things about me to make other students laugh," 45.8% of participants reported being mocked. In the statement "A student shoved me," 50% of subjects mentioned being hit, while in the statement "A student slapped or kicked me," 29.2% of all adolescents reported being physically assaulted. In the statement "A student insulted me or my family," 41.7% reported receiving insults. Finally, in the statement "A student tried to hurt my feelings," 45.8% reported feeling emotionally hurt.

The group with suicidal behavior in the AMSC-Q questionnaire exhibits lower performance, specifically in the dimensions of cognitive reappraisal and normative adjustment. Thus, in the statements "I request the floor and wait for my turn to speak," "I follow the rules," and "I respect the opinions of others, even if I don't agree," it is observed that the 3 adolescents with suicidal ideation manifested difficulty in adhering to group norms, respecting turns, and considering the opinions of others.

**Table 1.** Description of the social competencies and bullying in adolescents with ASD.

N (24)	Me/ $\bar{x}$	R/S.D.	Min	Max
Aggression and Victimization scales	17/23.9	79/22.74	0	79
Aggression	10/12.45	47/12.12	0	47
Victimization	4.5/13.12	51/17.39	0	51
Multidimensional Social Competence Questionnaire	131/129	109/31.88	73	182
Cognitive Reappraisal	21.5/20.12	24/6.71	4	28
Social Adjustment	36.5/35.29	42/11.87	14	56
Prosocial Behavior	25.5/24.04	30/9.2	5	35
Social Efficacy or Self-Efficacy	22/21.04	22/5.9	6	28
Normative Adjustment	30.5/29.04	22/6.08	13	35

Me=Median ,  $\bar{x}$  = Mean, R=Range, S.D.= Standard Deviation, Min= Minimum, Max= Maximum

**Table 2.** Description of the most representative questions of the Aggression/Victimization scales.

Questions	Cumulative Percentage	0 Times	1 Time	2 Times	3 Times	4 Times	5 Times	6 or more Times	Suicide Risk
I had physical fights because I was angry	41.7%	14	1	2	0	1	1	2	N.S.R.
		0	1	0	1	0	1	0	S.R.
I was angry most of the day	70.8%	7	3	2	3	1	0	5	N.S.R.
		0	0	0	2	0	0	1	S.R.
A student teased me to make me angry	54.2%	11	2	2	0	0	0	6	N.S.R.
		0	0	0	0	0	0	3	S.R.
A student said things about me to make other students laugh	45.8%	13	3	0	0	2	0	3	N.S.R.
		0	0	0	0	0	1	2	S.R.
A student shoved me	50%	11	3	2	3	1	0	1	N.S.R.
		1	0	0	0	0	1	1	S.R.
A student slapped or kicked me	29.2%	16	2	1	1	0	0	1	N.S.R.
		0	0	1	1	0	1	0	S.R.
A student insulted me or my family	41.7%	14	5	0	0	1	0	1	N.S.R.
		0	0	1	0	0	0	2	S.R.
A student tried to hurt my feelings	45.8%	13	3	1	2	0	0	2	N.S.R.
		0	0	0	0	0	1	2	S.R.

N.S.R. = No Suicide Risk, S.R. = Suicide Risk

**Table 3.** Description of the most representative questions in the Adolescent Multidimensional Social Competence Questionnaire.

Questions	Group	Completely False	Quite False	Somewhat False	Neither False nor True	Somewhat True	Quite True	Completely True
I request the floor and wait for my turn to speak	No Risk	0	1	3	3	2	2	10
	Risk	0	1	2	0	0	0	0
I keep promises	No Risk	0	0	0	2	4	2	13
	Risk	0	1	1	1	0	0	0
I respect the opinions of others, even if I do not agree	No Risk	0	0	0	1	3	2	14
	Risk	0	1	1	1	0	0	0

**Table 4.** Total performance on the Aggression/Victimization scales and Adolescent Multidimensional Social Competence Questionnaire in relation to the presence and absence of suicidal risk.

	Instruments	Me/ $\bar{x}$	R/S.D.	Min	Max
No Suicide Risk	<b>Aggression/Victimization Scale</b>	11/10.83	72/12	0	72
	Aggression Section	8/6.50	32/8.21	0	32
	Victimization Section	2/4.83	51/7.7	0	51
	<b>Multidimensional Social Competence Questionnaire</b>	138/136.50	107/31.90	75	182
	Cognitive Reappraisal Dimension	22/21.83	21/6.5	7	28
	Social Adjustment Dimension	37/36.83	42/11.95	14	56
	Prosocial Behavior Dimension	26/23	30/10.26	5	35
	Social Efficacy Dimension	23/22.75	22/5.77	6	28
	Normative Adjustment Dimension	32/31.91	14/3.28	21	35
Suicide Risk	<b>Aggression/Victimization Scale</b>	66/33	27/33.94	52	79
	Aggression Section	18/10.50	32/13.3	15	47
	Victimization Section	34/25.5	19/17.1	32	51
	<b>Multidimensional Social Competence Questionnaire</b>	103/136.50	50/51.61	73	123
	Cognitive Reappraisal Dimension	13/19	14/5.65	4	18
	Social Adjustment Dimension	31/35.50	23/27.57	22	45
	Prosocial Behavior Dimension	25/25	12/14.14	14	26
	Social Efficacy Dimension	16/24.50	2/4.9	15	17
	Normative Adjustment Dimension	18/32.50	9/0.70	13	22

Me=Median,  $\bar{x}$  = Mean, R=Range, S.D = Standard Deviation, Min= Minimum, Max= Maximum

Regarding the linear association between the degree of suicidal ideation and the perception of bullying, it is possible to assert that a higher perception of bullying is associated with greater suicidal ideation, with a correlation of 0.726 ( $p=0.000$ ). This occurs in both the aggression section (correlation 0.681,  $p=0.000$ ), and in the victimization section (correlation 0.453,  $p=0.26$ ) of the instrument. The previous data indicates that aggression and victimization are associated with the degree of suicidal ideation.

Concerning the overall performance in the AMSC-Q, no correlation was found ( $-0.345$ ,  $p=0.098$ ). However, negative correlations were observed in some dimensions of the questionnaire. Thus, in cognitive reappraisal, a negative correlation was found ( $-0.441$ ,  $p=0.031$ ), indicating that lower emotional regulation is associated with higher suicidal ideation. In social efficacy, a negative correlation was obtained ( $-0.453$ ,  $p=0.026$ ), indicating that a lower individual perception of social efficacy in social interaction is associated with a higher level of

suicidal ideation. In normative adjustment, a negative correlation was observed (-0.659,  $p=0.000$ ), indicating that lower adherence to social norms in a group is associated with a higher level of suicidal ideation. In social adjustment, a negative correlation was found (-0.127,  $p=0.553$ ), meaning that the less socially accepted behaviors the person displays, the higher their degree of suicidal ideation. Finally, in prosocial behavior, a negative correlation was obtained (-0.051,  $p=0.815$ ), showing that helping or comforting is not related to suicidal ideation.

**Table 5.** Correlation between the Social Competence Questionnaire, the Aggression/Victimization scales, and the level of suicide risk.

	Suicide Risk	
	Correlation Coefficient	Sig.
<b>Aggression/Victimization Scales</b>	.726	.000**
Aggression Section	.681	.000**
Victimization Section	.453	.026*
<b>Adolescent Multidimensional Social Competence Questionnaire</b>	-.345	.098
Cognitive Reappraisal Dimension	-.441	.031*
Social Adjustment Dimension	-.127	.553
Prosocial Behavior Dimension	-.051	.815
Social Efficacy Dimension	-.453	.026*
Normative Adjustment Dimension	-.659	.000**

\*\* Significant Correlation at  $P<0,01$

\* Significant Correlation at  $P<0,05$

## DISCUSSION

This research aimed to explore the association between the state of social competence and experiences of bullying, and the degree of suicidal ideation in adolescents with high-functioning ASD. The main findings reveal a correlation between the degree of suicidal ideation and both physical and verbal aggression and victimization. This aligns with another study that examined how students with ASD are affected by bullying. It was established that adolescents with ASD and suicidal behavior perceived bullying at school to be higher and were at a greater risk of being bullied or involved in bullying others (Ashburner et al., 2019). In the same vein, Adams et al. (2016) argue that adolescents with ASD are at a higher risk of bullying at school. Furthermore, the mistreatment they receive from their peers can have serious consequences, potentially leading them to suicide (Alfonzo, 2015). On the other

hand, Holden et al. (2020) state that the self-reported experience of bullying is associated with a higher risk of suicide, increasing the likelihood of a person attempting suicide.

Regarding the questionnaire assessing social competence, a significant correlation was observed only in certain dimensions. The negative linear association found in the dimension of cognitive reappraisal aligns with the findings of De La Cruz & Zuñiga (2017). These authors mention a correlation between suicidal ideation and emotional regulation, as adolescents showed difficulties in emotional modulation such as their ability to cope with different emotions. The negative relationship between the normative adjustment dimension and suicidal ideation suggests that lower acceptance of social norms is related to a higher level of suicidal thoughts. This result is consistent with evidence indicating that respecting norms within a group is crucial for coexistence and interaction among individuals (Pozzoli et al., 2012). This aligns with the Interpersonal Theory of Suicide (ITS), which posits that feelings of not belonging to a group increase the risk of completing suicide (Joiner et al., 2021). These considerations also coincide with some findings in the present research, as a significant association was observed between the social efficacy or self-efficacy dimension and suicidal ideation. This means that as expectations about the ability to interact with others decrease, the level of suicidal ideation increases.

Ruggieri (2020) suggests that the social challenges faced by individuals with ASD (such as experiencing bullying, the need to conceal their problems, and dissatisfaction with social acceptance) can lead to depression. In turn, depression may give rise to suicidal thoughts, suicide attempts, or even completed suicide. This perspective aligns with *Informe Trastornos del Espectro Autista: evidencia científica sobre la detección, el diagnóstico y el tratamiento* (Autism Spectrum Disorders Report: Scientific Evidence on Detection, Diagnosis, and Treatment) (Reviriego et al., 2022). The report emphasizes the need to incorporate social communication into the curriculum and underscores the importance of training parents to help individuals with ASD improve their social behavior and communication skills.

Lastly, it is crucial to note that suicide prevention involves various stakeholders in the educational community and healthcare system. Therefore, raising awareness about the significance of communicative health and its association with suicidal behavior is vital, particularly in vulnerable groups such as minors with ASD.

## LIMITATIONS, BIASES, AND PROJECTIONS

One limitation of this study is the absence of a method to calculate the sample size, which is attributed to this being a pilot study. Future research incorporating sample size calculations could provide more robust data for complex analyses and extend the findings to larger samples. Another limitation is the need for cautious interpretation of the results obtained from the AMSC-Q, due to the instrument not being validated in the country. Additionally, subsequent studies should consider the issue of invariable response bias, as some individuals consistently chose the same response for all items. On the other hand, there is evidence of population bias in this study, given that the sample was predominantly composed of male participants. In this regard, the literature suggests that females, from childhood, may experience the burden of 'masking'—an attempt to hide autistic traits for social acceptance—leading to mental health issues, emotional distress, anxiety, and a higher likelihood of engaging in self-harming behaviors or experiencing suicidal ideation (Bargiela et al., 2016).

Despite these limitations, it should be noted that this pilot study represents an initial exploration to understand suicidal behavior associated with the ASD population in our context.

## ACKNOWLEDGMENTS

The authors express their deepest gratitude to Francisco Javier Blanco Rodríguez for his generous contribution, dedication, and valuable time invested in reviewing this article.

## REFERENCES

Adams, R., Taylor, J., Duncan, A., & Bishop, S. (2016). Peer Victimization and Educational Outcomes in Mainstreamed Adolescents with Autism Spectrum Disorder (ASD). *Journal of Autism and Developmental Disorders*, 46(11), 3557–3566. <https://doi.org/10.1007/s10803-016-2893-3>

Alfonzo, I. (Ed.). (2015). *Educación Especial: Breves miradas de los actores en su práctica docente* (1ª ed.). <https://otrasvoceseneducacion.org/wp-content/uploads/2019/09/Educaci%C3%B3n-Especial.pdf>

Ambiado-Lillo, M. M., Sazo-Ávila, J., Aguilera-Quinto, S., Benavides-Niño, M. P., Benito, J., Borjas-Galvis, J., Cielo Deltell, M., Etchegoyen, C., Guajardo-Sáez, C. P., Mónaco, M. J., Ordoñez-Daza, L. F., Patrón-Fernández, M., Pugliese, N., Vargas-Villegas, D. S., Toledo-Cáceres, P. A., Zunino, D., & Vázquez-Fernández, P. (2022). Bullying a personas con trastornos de la comunicación integradas en establecimientos escolares: Rol de la Fonoaudiología y sus implicancias en la salud comunicativa. *Revista Chilena de Fonoaudiología*, 21(1), Article 1. <https://doi.org/10.5354/0719-4692.2021.61640>

American Psychiatric Association [APA]. (2013). *DSM-5 Manual Diagnóstico y Estadístico de los Trastornos Mentales* (5ª ed.). Editorial Médica Panamericana. <https://www.federaciocatalanadah.org/wp-content/uploads/2018/12/dsm5-manualdiagnosticoestadisticodelostrastornosmentales-161006005112.pdf>

Ashburner, J., Sagers, B., Campbell, M. A., Dillon-Wallace, J. A., Hwang, Y.-S., Carrington, S., & Bobir, N. (2019). How are students on the autism spectrum affected by bullying? Perspectives of students and parents. *Journal of Research in Special Educational Needs*, 19(1), 27–44. <https://doi.org/10.1111/1471-3802.12421>

Bargiela, S., Steward, R., & Mandy, W. (2016). The Experiences of Late-diagnosed Women with Autism Spectrum Conditions: An Investigation of the Female Autism Phenotype. *Journal of Autism and Developmental Disorders*, 46(10), 3281–3294. <https://doi.org/10.1007/s10803-016-2872-8>

Blanchard, A., Chihuri, S., DiGuseppi, C. G., & Li, G. (2021). Risk of Self-harm in Children and Adults With Autism Spectrum Disorder: A Systematic Review and Meta-analysis. *JAMA Network Open*, 4(10), e2130272. <https://doi.org/10.1001/jamanetworkopen.2021.30272>

Blood, G. W., & Blood, I. M. (2004). Bullying in Adolescents Who Stutter: Communicative Competence and Self-Esteem. *Contemporary Issues in Communication Science and Disorders*, 31(1), 69–79. [https://doi.org/10.1044/cicsd\\_31\\_S\\_69](https://doi.org/10.1044/cicsd_31_S_69)

Cassidy, S., Au-Yeung, S., Robertson, A., Cogger-Ward, H., Richards, G., Allison, C., Bradley, L., Kenny, R., O'Connor, R., Mosse, D., Rodgers, J., & Baron-Cohen, S. (2022). Autism and autistic traits in those who died by suicide in England. *The British Journal of Psychiatry*, 221(5), 683–691. <https://doi.org/10.1192/bjp.2022.21>

Casten, L. G., Thomas, T. R., Doobay, A. F., Foley-Nicpon, M., Kramer, S., Nickl-Jockschat, T., Abel, T., Assouline, S., & Michaelson, J. J. (2023). The combination of autism and exceptional cognitive ability is associated with suicidal ideation. *Neurobiology of Learning and Memory*, 197, 107698. <https://doi.org/10.1016/j.nlm.2022.107698>

Chu, C., Buchman-Schmitt, J. M., Stanley, I. H., Hom, M. A., Tucker, R. P., Hagan, C. R., Rogers, M. L., Podlogar, M. C., Chiurliza, B., Ringer, F. B., Michaels, M. S., Patros, C. H. G., & Joiner Jr., T. E. (2017). The interpersonal theory of suicide: A systematic review and meta-analysis of a decade of cross-national research. *Psychological Bulletin*, 143(12), 1313–1345. <https://doi.org/10.1037/bul0000123>

Costa, A. P., Loor, C., & Steffgen, G. (2020). Suicidality in Adults with Autism Spectrum Disorder: The Role of Depressive Symptomatology, Alexithymia, and Antidepressants. *Journal of Autism and Developmental Disorders*, 50(10), 3585–3597. <https://doi.org/10.1007/s10803-020-04433-3>

De La Cruz, L., & Zuñiga, T. (2017). *Ideación suicida y regulación emocional en adolescentes del municipio de Soledad, Atlántico* [Tesis de Grado, Universidad de La Costa]. <http://hdl.handle.net/11323/163>

Departamento de Estadísticas e Información de Salud [DEIS]. (2022). *Departamento de Estadísticas e Información de Salud*. <https://deis.minsal.cl/>

Departamento de Estadísticas e Información de Salud [DEIS]. (2023). *Reportaría Salud Mental 2023—SAS® Visual Analytics*. [https://informesdeis.minsal.cl/SASVisualAnalytics/?reportUri=%2Freports%2Freports%2Fad0c03ad-ee7a-4da4-bcc7-73d6e12920cf&sectionIndex=0&sso\\_guest=true&reportViewOnly=true&welcome=false](https://informesdeis.minsal.cl/SASVisualAnalytics/?reportUri=%2Freports%2Freports%2Fad0c03ad-ee7a-4da4-bcc7-73d6e12920cf&sectionIndex=0&sso_guest=true&reportViewOnly=true&welcome=false)

- Echeburúa, E. (2015). The many faces of suicide in the psychological clinic. *Terapia psicológica*, 33(2), 117–126. <https://doi.org/10.4067/S0718-48082015000200006>
- Fajardo, K., Álvarez, D., & Zambrano, V. (2021). Perfil epidemiológico del autismo en Latinoamérica. *Salud & Ciencias Médicas*, 1(2), 14–25.
- Fondo de las Naciones Unidas para la Infancia [UNICEF]. (2017). *Comunicación, infancia y adolescencia. Guía para periodistas: Suicidio*. <https://www.unicef.org/argentina/media/1536/file/Suicidio.pdf>
- Gómez-Ortiz, O., Romera-Félix, E. M., & Ortega-Ruiz, R. (2017). Multidimensionality of Social Competence: Measurement of the Construct and its Relationship With Bullying Roles. *Revista de Psicodidáctica (English ed.)*, 22(1), 37–44. <https://doi.org/10.1387/RevPsicodidact.15702>
- Gómez-Ortiz, O., Romera-Félix, E. M., Ortega-Ruiz, R., Herrera, M., & Norman, J. Oh. (2019). La competencia social multidimensional en la investigación sobre el acoso escolar: Un estudio transcultural. *Psicología Conductual*, 27(2), 217–238. <https://www.behavioralpsycho.com/producto/la-competencia-social-multidimensional-en-la-investigacion-sobre-el-acoso-escolar-un-estudio-transcultural/>
- Hedley, D., Hayward, S. M., Denney, K., Uljarević, M., Bury, S., Sahin, E., Brown, C. M., Clapperton, A., Dissanayake, C., Robinson, J., Trollor, J., & Stokes, M. A. (2021). The association between COVID-19, personal wellbeing, depression, and suicide risk factors in Australian autistic adults. *Autism Research: Official Journal of the International Society for Autism Research*, 14(12), 2663–2676. <https://doi.org/10.1002/aur.2614>
- Holden, R., Mueller, J., McGowan, J., Sanyal, J., Kikoler, M., Simonoff, E., Velupillai, S., & Downs, J. (2020). Investigating Bullying as a Predictor of Suicidality in a Clinical Sample of Adolescents with Autism Spectrum Disorder. *Autism Research*, 13(6), 988–997. <https://doi.org/10.1002/aur.2292>
- IBM Corp. (2012). *IBM SPSS Statistics for Windows (Versión 21, Vol. 28) [Software]*. IBM Corp. <https://hadoop.apache.org>
- Joiner, T. E., Jeon, M. E., Lieberman, A., Janakiraman, R., Duffy, M. E., Gai, A. R., & Dougherty, S. P. (2021). On prediction, refutation, and explanatory reach: A consideration of the Interpersonal Theory of Suicidal Behavior. *Preventive Medicine*, 152, 106453. <https://doi.org/10.1016/j.ypmed.2021.106453>
- Knox, E., & Conti-Ramsden, G. (2003). Article: Bullying risks of 11-year-old children with specific language impairment (SLI): Does school placement matter? *International Journal of Language & Communication Disorders*, 38(1), 1–12. <https://doi.org/10.1080/13682820304817>
- La Buissonnière, V., Schneider, S. C., Cepeda, S. L., Wood, J. J., Kendall, P. C., Small, B. J., Wood, K. S., Kerns, C., Saxena, K., & Storch, E. A. (2022). Predictors of Suicidal Thoughts in Children with Autism Spectrum Disorder and Anxiety or Obsessive-Compulsive Disorder: The Unique Contribution of Externalizing Behaviors. *Child Psychiatry & Human Development*, 53(2), 223–236. <https://doi.org/10.1007/s10578-020-01114-1>
- Little, A. W. (2001). Multigrade teaching: Towards an international research and policy agenda. *International Journal of Educational Development*, 21(6), 481–497. [https://doi.org/10.1016/S0738-0593\(01\)00011-6](https://doi.org/10.1016/S0738-0593(01)00011-6)
- López, V., & Orpinas, P. (2012). Las escalas de agresión y victimización: Validación y prevalencia en estudiantes chilenos. *Revista Latinoamericana de Psicología*, 44(2), 109–124. <https://dialnet.unirioja.es/servlet/articulo?codigo=4015660>
- Lung, F.-W., Shu, B.-C., Chiang, T.-L., & Lin, S.-J. (2019). Prevalence of bullying and perceived happiness in adolescents with learning disability, intellectual disability, ADHD, and autism spectrum disorder: In the Taiwan Birth Cohort Pilot Study. *Medicine*, 98(6), e14483. <https://doi.org/10.1097/MD.00000000000014483>
- Matthias, C., LaVelle, J. M., Johnson, D. R., Wu, Y.-C., & Thurlow, M. L. (2021). Exploring Predictors of Bullying and Victimization of Students with Autism Spectrum Disorder (ASD): Findings from NLTS 2012. *Journal of Autism and Developmental Disorders*, 51(12), 4632–4643. <https://doi.org/10.1007/s10803-021-04907-y>
- Ministerio de Salud [MINSAL]. (2019). *Guía práctica en Salud Mental y prevención de suicidio para estudiantes de Educación Superior*. Gobierno de Chile. [https://www.minsal.cl/wp-content/uploads/2019/09/2019.09.09\\_Gu%C3%ADa-Pr%C3%A1ctica-en-Salud-Mental-y-Preveni%C3%B3n-de-Suicidio-para-estudiantes-de-educaci%C3%B3n-superior.pdf](https://www.minsal.cl/wp-content/uploads/2019/09/2019.09.09_Gu%C3%ADa-Pr%C3%A1ctica-en-Salud-Mental-y-Preveni%C3%B3n-de-Suicidio-para-estudiantes-de-educaci%C3%B3n-superior.pdf)
- Okasha, A., Lotaf, F., & Sadek, A. (1981). Prevalence of suicidal feelings in a sample of non-consulting medical students. *Acta Psychiatrica Scandinavica*, 63(5), 409–415. <https://doi.org/10.1111/j.1600-0447.1981.tb00690.x>
- Olweus, D. (1998). *Conductas de acoso y amenaza entre escolares*. Ediciones Morata. <https://books.google.com.co/books?id=S0wSk71uQz0C&printsec=frontcover&hl=es#v=onepage&q&f=false>
- Organización Mundial de la Salud [OMS]. (2021). *Suicidio*. <https://www.who.int/es/news-room/fact-sheets/detail/suicide>
- Park, I., Gong, J., Lyons, G. L., Hirota, T., Takahashi, M., Kim, B., Lee, S., Kim, Y. S., Lee, J., & Leventhal, B. L. (2020). Prevalence of and Factors Associated with School Bullying in Students with Autism Spectrum Disorder: A Cross-Cultural Meta-Analysis. *Yonsei Medical Journal*, 61(11), 909–922. <https://doi.org/10.3349/ymj.2020.61.11.909>
- Pozzoli, T., Gini, G., & Vieno, A. (2012). The Role of Individual Correlates and Class Norms in Defending and Passive Bystanding Behavior in Bullying: A Multilevel Analysis. *Child Development*, 83(6), 1917–1931. <https://doi.org/10.1111/j.1467-8624.2012.01831.x>
- Reviriego, E., Bayón, J. C., Gutiérrez, A., & Galnares-Cordero, L. (2022). *Trastornos del Espectro Autista: Evidencia científica sobre la detección, el diagnóstico y el tratamiento*. GuíaSalud. [https://doi.org/10.46995/ot\\_3](https://doi.org/10.46995/ot_3)
- Ruggieri, V. (2020). Autismo, depresión y riesgo de suicidio. *Medicina*, 80(2), 12–16. <https://www.medicinabuena.com/indices-de-2020/volumen-80-ano-2020-s-2-indice/autismo/>
- Salvo, L., Melipillán, R., & Castro, A. (2009). Reliability, validity and cutoff point for scale screening of suicidality in adolescents. *Revista chilena de neuropsiquiatría*, 47(1), 16–23. <https://doi.org/10.4067/S0717-92272009000100003>
- Smith, A. R., Hunt, R. A., Grunewald, W., Jeon, M. E., Stanley, I. H., Levinson, C. A., & Joiner, T. E. (2023). Identifying Central Symptoms and Bridge Pathways Between Autism Spectrum Disorder Traits and Suicidality Within an Active Duty Sample. *Archives of Suicide Research*, 27(2), 307–322. <https://doi.org/10.1080/13811118.2021.1993398>
- Sociedad de Psiquiatría y Neurología de la infancia y adolescencia [SOPNIA]. (2017). *Trastorno del Espectro Autista*. <https://www.camara.cl/verdoc.aspx?prmid=112506&prmtipo=documentocomision>

Subsecretaría de Salud Pública. (2017). *Encuesta nacional de salud 2016-2017 Primeros resultados*. [https://www.minsal.cl/wp-content/uploads/2017/11/ENS-2016-17\\_PRIMEROS-RESULTADOS.pdf](https://www.minsal.cl/wp-content/uploads/2017/11/ENS-2016-17_PRIMEROS-RESULTADOS.pdf)

van Roekel, E., Scholte, R. H. J., & Didden, R. (2010). Bullying Among Adolescents With Autism Spectrum Disorders: Prevalence and Perception. *Journal of Autism and Developmental Disorders*, 40(1), 63–73. <https://doi.org/10.1007/s10803-009-0832-2>

Yáñez, C., Maira, P., Elgueta, C., Brito, M., Crockett, M. A., Troncoso, L., López, C., Troncoso, M., Yáñez, C., Maira, P., Elgueta, C., Brito, M., Crockett, M. A., Troncoso, L., López, C., & Troncoso, M. (2021). Estimación de la prevalencia de trastorno del Espectro Autista en población urbana chilena. *Andes pediátrica*, 92(4), 519–525. <https://doi.org/10.32641/andespediatr.v92i4.2503>

Zeidan, J., Fombonne, E., Scolah, J., Ibrahim, A., Durkin, M. S., Saxena, S., Yusuf, A., Shih, A., & Elsabbagh, M. (2022). Global prevalence of autism: A systematic review update. *Autism Research: Official Journal of the International Society for Autism Research*, 15(5), 778–790. <https://doi.org/10.1002/aur.2696>