

Self-harm in Children and Adolescents with Autism. A Nursing Vision from an Integrative Review of the Literature

Nuria Bataller Gilabert*

Nurse Specialist in Mental Health in the Infant-Adolescent Autism Therapeutic Hospitalization unit, Barcelona, Spain.

***Corresponding author:** Nuria Bataller Gilabert, Nurse Specialist in Mental Health in the Infant-Adolescent Autism Therapeutic Hospitalization unit, Barcelona, Spain. Tel: 678006570.

Submitted: 20 February 2023

Accepted: 03 March 2023

Published: 02 April 2023

doi <https://doi.org/10.63620/MKJCNR.2023.1012>

Citation: Bataller., G, N. (2023). Self-harm in children and adolescents with autism: A nursing vision from an integrative review of the literature. *J of Clin Nur Rep*, 2(1), 01-05.

Abstract

Background: Autism belongs to a group of disorders that affect neurodevelopment called Autism Spectrum Disorders (ASD) characterized mainly by presenting alterations in behavior, interests, communication and social interaction. Its development begins from the stage of childhood and persists throughout life. Worldwide, we find that 1% of the population suffers from this disorder, being more frequent in males than in females, in a 4:1 ratio. Children with ASD present great difficulties in adapting to the environment due to their great mental rigidity and poor social skills; but also due to the number of challenging behaviors they present. Specifically, children and adolescents with autism are more vulnerable than other groups to manifest self-injurious behaviors.

Methodology: A review of the literature was carried out. We searched 4 academic databases, which identified 7 relevant studies. McMaster University has been used as a Checklist of the articles used for the bibliographic review.

Results: Three themes were identified: the risk factors associated with self-injurious behaviors in autism, the interventions carried out by the different health professionals and the nursing contribution in this field.

Conclusions: Self-harm in autistic patients should be interpreted as an inadequate coping strategy to manage a series of stimuli and feelings. If the person with autism cannot communicate it, the nurse has a key role, due to her continuous observation capacity, in identifying the reasons for self-harm in order to generate, propose and facilitate other less harmful and more adaptive skills.

Relevance to Clinical Practice: Nurses have a clear role in the prevention, recording, and management of self-injurious behaviors in children and adolescents with autism. More clarity is required on how nurses should play this role in their work settings.

Keywords: Autism, Self-injurious Behavior (self-harm,self-injury), Intervention

Introduction

The term autism comes from the Greek word “eafismos” which means “closed in on oneself”. This concept had its beginnings in the field of Psychology in 1911 in a book entitled “Dementia Praecox or the Group of Schizophrenias”, where it is used to describe one of the characteristic symptoms of schizophrenia [1].

However, the term Autism Spectrum Disorder (ASD) was first described by Kanner in 1943. The latter author, who separated the concept of autism from schizophrenia, identified and described some common characteristics that these types of people presented. Among them are immobile behavior, isolation and delay or absence of the acquisition of verbal language [2,3].

The information and knowledge about Autism Spectrum Disorder, hereinafter ASD, has been changing significantly over time but, without a doubt, the most significant change occurred with the publication of the Diagnostic and Statistical Manual of Mental Disorders. , DSM-5 [2]. Changes have occurred in it that have modified the current conception of said clinical picture.

The DSM-5 defines Autism Spectrum Disorder 299.00 with two main criteria. Criterion A describes impairments in social communication and social interaction, while Criterion B addresses restricted and repetitive patterns of behavior, interests, or activities [2]. In addition to this, people with ASD have extremely complex medical and psychological profiles with multiple comorbid medical disorders, such as sleep disorders, seizures, Attention Deficit Hyperactivity Disorder (ADHD), among others.

In short, the ASD mainly presents a triad of problems in communication and language, social interaction and flexibility, which are considered the core of the Autism Spectrum [4].

The scientific literature describes various types of restrictive and ritualistic repetitive behavior in children with autism, including, but not limited to, stereotypies, obsessions, compulsions, echolalia, rituals, self-injurious behaviors, and the need for equality [5]. Although it is a common feature in people with autism, knowledge about its phenomenology, assessment, and/or treatment is limited [6-7].

These types of repetitive behaviors are typically identified in older children and adolescents and more difficult to define in infants and toddlers, particularly because repetitive behavior is common and developmentally appropriate in this population [7].

The concept of self-harm according to the Diagnostic and Statistical Manual of Mental Disorders is mentioned for the first time in a section dedicated to "conditions that need further study" and it specifies "non-suicidal self-harm" [2]. A frequency of at least five days in the last year is considered in which the person intentionally inflicts injuries on the body surface that cause bleeding, bruising or pain. In addition, the person performs said behavior with one or several purposes, among which are: to alleviate a negative feeling or cognitive state, to solve an interpersonal difficulty or to induce a state of positive feelings [8].

If we talk about self-harm in people with autism, we must resort to research with this population since it presents some specific characteristics [9]:

- The behavior causes damage to body tissues (bruises, scratches, bites, usually on the face, head and extremities).
- It is a rhythmic, repetitive and constant movement; for example, hitting your head with your hand over and over again.
- Self-harm is not planned.
- Frustration, anxiety and the concomitant desire to escape from a situation can be part of the reasons that trigger self-harm.

The topography of self-harm in autism is heterogeneous without the use of instruments: hitting the head, face, jaw or eyes, biting, nail pulling, scratching, hair or teeth pulling, picking, etc. punching each other, slapping each other in the ear or head, or kneeling in the face, among others [10].

Self-injurious behavior does not seem to have a simple, straightforward, single explanation. The biological predisposition, certain psychological states of stress, atypical sensory processing, alterations in communication, medical problems, limitations in emotional regulation, among others, can lead the person with autism to harm themselves [11].

Research has shown that interventions for children and adolescents with autism who self-harm correspond exclusively to the field of medicine and psychology, leaving aside the role that the nurse acquires in this type of situation.

o What does this document contribute to the world community in general?

- There is clear evidence that many nurses are involved in the management of patients with autism who exhibit self-injurious behaviour.
- The contribution of nurses in this field is limited due to the lack of scientific evidence and therefore of training that exists on the subject.
- It is likely that focusing on the description of the role of the nurse has an effect on their participation and management of the autistic patient with self-injurious behavior.

Objectives

Explore the existing information to date on self-harm in autism, all from a focus on nursing practice.

Methodology

A review of the current literature was carried out. The five stages of problem identification, bibliographic search, evaluation, analysis and presentation were completed. The PICO qualitative framework was used to identify the research question and help generate the search strategy. Synonyms were identified using the alternatives suggested in the databases. Key terms were combined using the Boolean operators. This process is shown in Table 1.

Parameters were established to include those publications in English and Spanish in the last 10 years (2013-2023) and that the studies focus on the population between 6 and 18 years of age. The following databases were searched: CINAHL, PubMed, Cuiden, and Scielo. The McMaster University verification view was used for the acceptance of articles in our systematic review.

Inclusion Criteria

The studies included in this review were those conducted between 2013 and 2023 and written in English or Spanish.

This search strategy yielded 101 articles. 92 articles were rejected when reviewing the abstract. Seven articles appeared to meet these criteria and were read in their entirety. These seven articles were ultimately included in the study, as documented in the Prisma flowchart.

The PRISMA diagram (figure 1) describes the search process. Table 2 shows a summary of the seven articles included in this review.

Table 1: Key terms and synonyms used in the database searches.

	Keyword
word 1	Autism
AND	
word 2	Self-injurious behavior
AND	
word 3	Intervention
NOT	
word 4	Suicidal

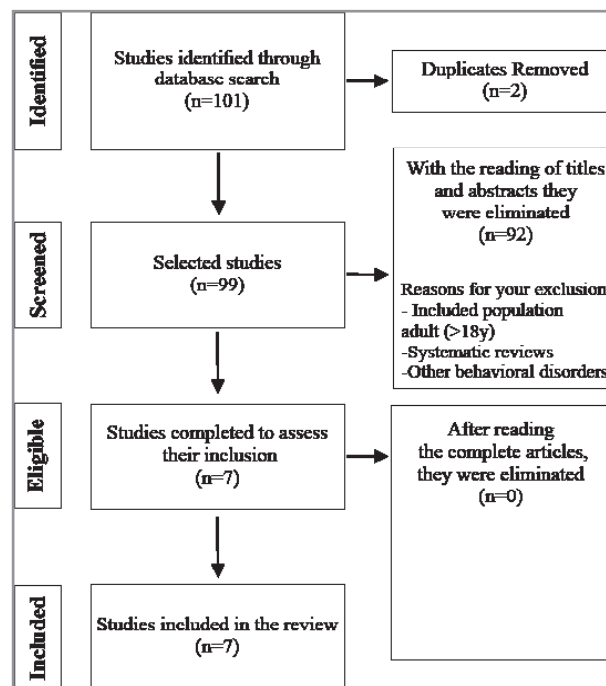


Figure 1: Modified version of the PRISMA diagram with the studies included in the systematic review.

Critical appraisal

A critical evaluation of each article was carried out using a structured and recognized tool. The McMaster University Checklist was used for all seven studies.

Analysis

During the reading of the different articles, a virtual color code was used to identify the common points of the investigation. Finally, the overlapping of the different topics identified was carried out, which led to the grouping of what made up the points to be dealt with in this review.

Table 2: Summary of the seven articles included in this review.

AUTHORS	TITLE	METHODOLOGY	POPULATION	GOALS
C. Rattaz	Symptom severity as a risk factor for self-injurious behaviours in adolescents with autism spectrum disorders	Longitudinal prospective study	152 adolescents with ASD	-Risk and protective factors
Parabhjot Malhi	Intentional Self Harm in Children with Autism	Retrospective cross-sectional study	1252 children with ASD	-Risk factor's
Jacqueline Flowers	Associated Factors of Self-injury Among Adolescents with Autism Spectrum Disorder in a Community and Residential Treatment Setting	Retrospective cross-sectional study	145 children and adolescents with ASD	-Risk factor's
Catherine Lavery	Persistence and predictors of self-injurious behaviour in autism: a ten-year prospective cohort study	prospective cohort study	67 children and adolescents with ASD	-Risk factor's
DM Richman	Predictors of self-injurious behaviour exhibited by individuals with autism spectrum disorder	Database analysis	617 children with ASD	-Risk factor's
Machado AF	Satisfactory response to electroconvulsive therapy in an autistic patient with severe self-injurious behavior	Descriptive	1 child with ASD	-Intervention: ECT
Mariam Al-Khozami	Using Functional Communication Training to Reduce Self-Injurious Behavior for Individuals with Autism Spectrum Disorder	clinical trial	3 children between 4-14 years	-Intervention: functional communication

Results

Risk factors for self-injurious behavior in children and adolescents with autism.

In five of the seven articles, possible risk factors for self-injurious behaviors in children and adolescents under 18 years of age with a diagnosis of autism were identified.

Four of them agree that stereotypes are a risk factor present in most children who present self-injurious behavior [12-16]. According to Rattaz and Richman, this is because stereotypes are similar in topography to self-injurious behaviors and therefore can be a precursor in certain cases.

Another risk factor that was present in the study sample was cognitive functioning. Flowers specifies that a one-unit increase in the score obtained on the Vineland causes the frequency and severity of self-injurious behavior to decrease by 2% [12].

Three of the five studies suggest that communication skills may be another risk factor that can trigger self-injurious behavior in children and adolescents with autism [12,13,15]. According to Flowers, as communication skills decline, the frequency and severity of self-harm increases [12]. Rattaz specifies that in adolescents with difficulties in adaptively expressing their emotions, a greater persistence of self-harm was observed [15].

Three of the five articles indicate impulsivity as a robust predictor of the appearance and severity of self-injurious behaviors. According to Richman, self-injurious behavior can be exacerbated by motor impulse control difficulties commonly associated with people with ADHD [16]. Likewise, Lavery and Rattaz identify hyperactivity as another important risk factor to take into account [15].

Both Lavery and Malhi identify comorbid disorders of mood, anxiety, and behavior as another risk factor in the appearance of self-injurious behavior [14].

There are contradictory findings between the results obtained by Flowers and Malhi [14]. The first one rules out sensory processing as a risk factor for self-injurious behavior while the second one includes it.

Another contraindication is the one indicated by the articles written by Flowers and Lavery who argue, on the one hand, that age is not a risk factor for the appearance of self-injurious behavior and, on the other hand, that it is [13]. According to Lavery, with increasing age, the severity and intensity of self-harm decreases [13].

Finally, Malhi identifies low maternal education as another risk factor [13].

Interventions against self-injurious behaviors in children and adolescents diagnosed with autism.

The interventions that are currently described in the scientific literature against self-injurious behaviors in children and adolescents with autism are detailed in two of the seven articles that we have used for this review.

According to Braz, electroconvulsive therapy (ECT) gave a satisfactory response in a 17-year-old male patient diagnosed with severe autism, without language development and unable to per-

form basic self-care [17]. Four ECT sessions were performed over the course of two weeks and a significant improvement was observed in terms of self-injurious behavior and autonomy. The effects or changes that occur in the brain are unknown, despite some hypotheses.

Nursing vision of self-injurious behaviors in children and adolescents with autism.

There is currently no evidence available in the reviewed databases on the role that a nurse can play in dealing with self-injurious behaviors in children and adolescents with autism.

Discussion

This review has identified that there are a number of risk factors that predispose children and adolescents with autism to engage in self-injurious behaviour. Among them are impulsivity, stereotypes, low cognitive functioning, poor communication skills, comorbid disorders associated with ASD, atypical sensory processing, age, and even low maternal education. Knowing the risk factors for a certain problem, in this case of self-injurious behaviour, will help health professionals to carry out early intervention in those people who are considered to be at higher risk for the development of said behaviour.

Regarding the interventions collected so far in the scientific literature, that have been tested in children and adolescents with autism to reduce self-injurious behavior are Electroconvulsive Therapy and Functional Communication Training.

Regarding Electroconvulsive Therapy, there is no robust evidence to justify its usefulness against self-harm in patients with autism. In contrast, an article published by Children's Health Defense was found, which affirmed that electroconvulsive therapy in autistic youth is unjustified and dangerous [18].

On the other hand, Functional Communication Training has proven to be effective, without showing harmful effects for the child or adolescent.

Despite the fact that in the daily practice of nurses working in specialized autism units we are aware that multidisciplinary work is required, the role of nurses is not described or included in the scientific literature. The nurses who work with this type of patient play a unique role by being present 24 hours a day, observing and recording any type of self-injurious behavior, as well as its possible precipitants and strategies; In addition to modeling with the parents of the child or adolescent.

Limitations

One of the main limitations found during this review is the null bibliography available based on the role of nursing in autism spectrum disorder and self-injurious behavior.

It must also be borne in mind that practically all of the selected items originate from countries other than Spain. This may imply a bias, since both the role of nursing professionals and the training they receive may vary from one country to another.

It is also worth mentioning the limitations caused by the language, since all the.

The articles that make up this review are written in English, so

during the translation and comprehension work of the texts they may have been lost.

certain enriching details and nuances.

Conclusions

As far as the hospital environment is concerned, the Nursing professional is the one who mostShe is in contact with the autistic child and her caregivers, for this reason it is crucial to have the skills to identify problems and provide essential care to these children and their families.

The interventions carried out by Nursing must take into account the needs of each child and the resources available to the family to individualize care in each case and adapt to the development of the child.

Lastly, it is worth noting as fundamental the fact that Nursing acquires the necessary knowledge regarding Autism Spectrum Disorders, more specifically of self-injurious behavior, since it will depend on being able to adequately cover the care needs of autistic children and their families. With proper action by health professionals, we will be closer to reaching the goal of making the characteristics of autistic children visible, and in this way we will be able to reduce the prejudices of the community, thus improving the adaptation and quality of life of this group.

Relevance to Clinical Practice

Nurses make up a large part of the total healthcare profession and if their contribution to self-injurious behaviors in people with autism were to be increased, the potential benefits for patient outcomes could be enormous. Therefore, it is vital to know what the role of nurses is in dealing with non-suicidal self-harm in minors with a diagnosis of autism, so that our autonomous role as health professionals in this field is recognized.

Self-injury must be interpreted as an inadequate coping strategy to manage a variety of negative and overwhelming stimuli and feelings. If the person with autism cannot communicate it, we must be the ones to identify the reasons for self-harm in order to generate, propose and facilitate other abilities that are less harmful and more adaptive.

Interest Conflict

The author did not declare any conflict of interest regarding the research, authorship and/or publication of this article.

References

1. Bleuler, E. (1949). *Dementia praecox or the group of schizophrenias* (8th ed.). International Universities Press.
2. American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Massón.
3. Olmedo, C. (2008). The evolution of the term autism. Innovation and Educational Experiences. Retrieved from http://csi-csif.es/andalucia/modules/mod-ense/revista/pdf/Numero_9/CATALINA_OLMEDO_1.pdf
4. Aguilera, M. C. (2010). Teacher support manual: Education of students with autism spectrum disorders. SDL Impressions.
5. Malmberg, D. B. (2007). Assessment of a collaborative parent education program targeting the rigid and ritualistic behaviors of children with autism. ProQuest Dissertations Publishing.
6. Lam, K. S. L., & Aman, M. G. (2007). The Repetitive Behavior Scale-Revised: Independent validation in individuals with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 37(5), 855-866.
7. Wolf, J. J., Botteron, K. N., Dager, S. R., Elison, J. T., Estes, A. M. (2014). IBIS Network longitudinal patterns of repetitive behavior in toddlers with autism. *Journal of Child Psychology and Psychiatry*, 55(8), 945-953.
8. Madge, N., Hewitt, A., Hawton, K., De Wilde, E. J., Corcoran, P. (2008). Deliberate self-harm within an international community sample of young people: Comparative findings from the Child & Adolescent Self-harm in Europe (CASE) study. *Journal of Child Psychology and Psychiatry*, 49(6), 667-677.
9. Oliver, C., Petty, J., Ruddick, L., & Bacarese-Hamilton, M. (2012). The association between repetitive, self-injurious and aggressive behavior in children with severe intellectual disability. *Journal of Autism and Developmental Disorders*, 42(5), 910-919.
10. Lundqvist, O. (2011). Psychometric properties and factor structure of the Behavior Problems Inventory (BPI-01) in a Swedish community population of adults with intellectual disability. *Research in Developmental Disabilities*, 32(6), 2295-2303.
11. Paula-Pérez, I., & Artigas-Pallarés, J. (2016). Vulnerability to self-harm in autism. *Revista de Neurología*, 62(1), 27-32.
12. Flowers, J., Lantz, J., Hamlin, T., & Simeonsson, R. J. (2020). Associated factors of self-injury among adolescents with autism spectrum disorder in a community and residential treatment setting. *Journal of Autism and Developmental Disorders*, 50(8), 2987-3004.
13. Lavery, C., Oliver, C., Moss, J., Nelson, L., & Richards, C. (2020). Persistence and predictors of self-injurious behaviour in autism: A ten-year prospective cohort study. *Molecular Autism*, 11, Article 8. <https://doi.org/10.1186/s13229-019-0307-z>
14. Malhi, P., & Sankhyani, N. (2021). Intentional self-harm in children with autism. *Indian Journal of Pediatrics*, 88(2), 158-160.
15. Rattaz, C., Michelin, C., & Baghdadli, A. (2015). Symptom severity as a risk factor for self-injurious behaviours in adolescents with autism spectrum disorders. *Journal of Intellectual Disability Research*, 59(8), 730-741.
16. Richman, D. M., Barnard-Brak, L., Bosch, A., Thompson, S., Grubb, L., et al. (2013). Predictors of self-injurious behaviour exhibited by individuals with autism spectrum disorder. *Journal of Intellectual Disability Research*, 57(5), 429-439.
17. Brazilian Journal of Psychiatry. (2019). *Braz J Psychiatry*, 41, 458-464.
18. Children's Health Defense. (2021). Electroconvulsive therapy in autistic youth is unwarranted and dangerous, medical experts say. <https://childrenshealthdefense.org/news/electroconvulsive-therapy-in-autistic-youth-is-unjustified-and-dangerous-say-medical-experts/?lang=es>
19. Lakhzami, M., & Chitiyo, M. (2022). Using functional communication training to reduce self-injurious behavior for individuals with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 52(9), 3586-3597.