

LETTER OF REVIEWERS

Reviewer A:

Recommendation: Revisions Required

Relevance: High

Novelty: High

Presentation and writing: High

Comments for authors:

1. It is important to consider in the conclusion that, since there were no studies supporting the proposed review, it is not possible to assert that functional communication training can be recognized as an effective intervention to reduce self-injurious behaviors. Consequently, it becomes necessary to identify which interventions have scientific evidence for treating self-injurious behaviors in individuals with ASD and to determine which among them proves to be the most effective.

Reviewer B:

Recommendation: Resubmit for Review

Relevance: Very high

Novelty: Very high

Presentation and writing: Very high

Comments for authors:

2. In the introduction, when defining the term self-injury, it is essential to include a brief reference to the DSM-5's definition of self-injury, followed by a discussion of self-injury in neurodevelopmental disorders and finally self-injury in autism.

3. Fourth paragraph of the introduction: Genetic vulnerability is also associated as a risk factor (Paula, 2018 pp 48), and it would be beneficial to add this factor and articles that support it.

Reviewer C:

Recommendation: Revisions Required

Relevance: Moderated

Novelty: Moderated

Presentation and writing: Moderated

Comments for authors:

Method

1. It is suggested to provide a more detailed explanation of how discrepancies between reviewers were addressed.

Results

2. The authors state, "In the case of empty systematic reviews, the Cochrane Network suggests considering research that does not meet all inclusion criteria or has some exclusion criteria. However, it may still be helpful for secondary analyses (Cochrane Effective Practice and Organisation of Care (EPOC), 2017)." However, they do not specify how these secondary analyses will be handled in the method

section. Please explain this in more detail.

Discussion

- 3. Although recommendations for future research are mentioned, more specific suggestions on how future studies should be designed to address the identified gaps would be helpful.
- 4. A potential limitation is the exclusion of other important databases, such as PsycINFO.

RESPONSE LETTER

Dear reviewer and editor,

1. It is important to consider in the conclusion that, since there were no studies supporting the proposed review, it is not possible to assert that functional communication training can be recognized as an effective intervention to reduce self-injurious behaviors. Consequently, it becomes necessary to identify which interventions have scientific evidence for treating self-injurious behaviors in individuals with ASD and to determine which among them proves to be the most effective.

Reply: We agree with the reviewer's observation regarding the lack of controlled studies supporting the efficacy of functional communication training in reducing self-injurious behaviors in individuals with ASD. However, there are uncontrolled and quasi-experimental studies suggesting positive effects of this intervention in reducing self-injurious behaviors. These preliminary studies provide a theoretical and practical foundation that justifies the need for controlled and randomized studies to rigorously assess its efficacy in this population.

"Our study found that, at the time of the search, no randomized clinical trials or single-case experimental studies had been published evaluating the effect of functional communication training in regulating self-injurious behaviors in children and adolescents under 18 diagnosed with ASD. As a result, the effectiveness of functional communication training in regulating self-injurious behaviors in this population is still being determined based on the evidence reported in academic databases. However, uncontrolled and quasi-experimental studies suggest positive effects of this intervention in reducing self-injurious behaviors. These preliminary studies provide a theoretical and practical foundation that justifies the need for controlled and randomized studies to assess its effectiveness in this population rigorously. The results of the present systematic review demonstrate the need for further research in this area, primarily focused on controlled studies that allow causal inference of the actual effect of functional communication training in regulating self-injurious behaviors in the ASD population."

2. In the introduction, when defining the term self-injury, it is essential to include a brief reference to the DSM-5's definition of self-injury, followed by a discussion of self-injury in neurodevelopmental disorders and finally self-injury in autism.

Reply: In the context of neurodevelopmental disorders, such as ASD, the DSM-5 considers that self-injury may occur without suicidal intent and may be associated with deficits in impulse control, communication difficulties, and atypical sensory responses. These factors interact to increase the likelihood of self-injurious behaviors, which, in these cases, have repetitive and persistent characteristics as part of the behavioral profile of neurodevelopmental disorders (American Psychiatric Association, 2013).

Reference: American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

We added to the first paragraph of the Background section:

"Self-injurious behaviors represent highly harmful clinical phenomena, with the potential for chronicity and a significant negative impact on individuals' health and well-being. In the context of neurodevelopmental disorders, self-injurious behavior is defined as behavior in which an individual unintentionally causes harm to themselves, excluding suicidal intent (Iwata et al., 1994). Like other behaviors with an operant component, these behaviors are governed by environmental consequences that increase the likelihood of repetition in similar contexts. On the other hand, the DSM-5 also defines self-injury in the context of neurodevelopmental disorders, noting that it can occur without suicidal intent and is associated with deficiencies in impulse control, communication difficulties, and atypical sensory responses. These factors interact to increase the likelihood of self-injurious behaviors, which, in these cases, have repetitive and persistent characteristics as part of the behavioral profile of neurodevelopmental disorders (American Psychiatric Association, 2013). In other words, self-injurious behaviors are reinforced by the effects they produce and will persist as long as they continue to yield the same outcomes in similar situations (Hanley et al., 2003). These behaviors are particularly prevalent in individuals with neurodevelopmental disorders, such as Autism Spectrum Disorder (ASD) (Maenner et al., 2023), affecting various areas of their functioning and quality of life (Waizbard-Bartov et al., 2023). Therefore, it is imperative to have effective and timely treatments to address these behaviors and reduce the associated disability."

3. Fourth paragraph of the introduction: Genetic vulnerability is also associated as a risk factor (Paula, 2018 pp 48), and it would be beneficial to add this factor and articles that support it.

Reply: In her article, Paula (2018) mentions that genetic vulnerability is a key factor contributing to the development of self-injurious behaviors in individuals with ASD, highlighting how this genetic predisposition can interact with various specific environments to increase the manifestation of these behaviors. The author emphasizes that certain environmental and contextual factors can act as triggers in individuals with a genetic predisposition, raising the likelihood of self-injurious behaviors. This approach underscores the importance of understanding both genetic components and environmental factors in the occurrence and persistence of self-injurious behaviors in this population.

Reference: Paula, I. (2018). *La autolesión en el autismo*. Universidad de Barcelona.

<https://diposit.ub.edu/dspace/bitstream/2445/113747/1/657448.pdf>

We added to the fourth paragraph of the Background section:

"The risk factors for self-injurious behaviors in individuals with ASD vary depending on the presence or absence of intellectual disability (Furniss & Biswas, 2020). In individuals with ASD and intellectual disability, risk factors include atypical sensory processing, insistence on sameness, deficits in social and communicative functioning, and high levels of anxiety (Dempsey et al., 2016; Duerden et al., 2012; Soke et al., 2017). In individuals with ASD without associated intellectual disability, risk factors are limited to atypical sensory processing, insistence on sameness, and deficits in social and communicative functioning (Black et al., 2017; Rattaz et al., 2015; Rodgers et al., 2012). Additionally, Paula (2018) highlights that genetic vulnerability is a critical factor in the development of self-injurious behaviors in this population, noting that this genetic predisposition can interact with specific environments to intensify the manifestation of these behaviors. According to Paula (2018), certain environmental and contextual factors can act as triggers in individuals with a genetic predisposition, increasing the likelihood of self-injurious behaviors."

4. It is suggested to provide a more detailed explanation of how discrepancies between reviewers were addressed.

Reply: We add:

"To resolve discrepancies in evaluating these sections, two reviewers discussed each point in meetings organized for this purpose. A third reviewer was called upon to make the final decision if an agreement could not be reached. It is worth noting."

5. The authors state, "In the case of empty systematic reviews, the Cochrane Network suggests considering research that does not meet all inclusion criteria or has some exclusion criteria. However, it may still be helpful for secondary analyses (Cochrane Effective Practice and Organisation of Care (EPoC), 2017)." However, they do not specify how these secondary analyses will be handled in the method section. Please explain this in more detail.

Reply: We add:

"Cochrane's recommendation for empty reviews suggests reporting studies that partially meet the inclusion criteria. Therefore, a descriptive sub-analysis of these studies was conducted, in which each one was individually described."

6. Although recommendations for future research are mentioned, more specific suggestions on how future studies should be designed to address the identified gaps would be helpful.

Reply: We recognize the importance of the reviewer's opinion; however, we believe it is not feasible to provide specific recommendations for randomized clinical trials on the intervention of functional communication training for the regulation of self-injurious behavior in children and adolescents diagnosed with ASD. The recommendations would necessarily depend on the unique design chosen by each investigator for their study.

7. A potential limitation is the exclusion of other important databases, such as PsycINFO.

Reply: We add a limitation:

"Finally, excluding the PsycINFO database represents a limitation, as it may have led to the omission of additional studies relevant to our research question."