



NON-SUICIDAL SELF-INJURY: CONCEPTUALIZATION AND CLINICAL ASSESSMENT IN THE SPANISH-SPEAKING POPULATION

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La Autolesión No Suicida (ANS) ha variado su conceptualización y evaluación a lo largo de los años. El conocimiento clínico sobre ANS depende de la evaluación y muestra investigada. Sin embargo, la mayoría de revisiones al respecto no cuentan con muestras hispanoparlantes. Este estudio trata de revisar el concepto y la evaluación clínica de ANS en población hispanoparlante desde un punto de vista comprensivo. Mediante revisión sistemática, incluyendo literatura gris, se encontraron 8 instrumentos validados en muestras hispanoparlantes. Se describen en cuanto a su desarrollo, formato, características que mide, aplicabilidad clínica y psicométricos. Siendo mayoría las adaptaciones en adolescentes comunitarios, destaca la creación y adaptación en mexicanos. Aunque con potencial clínico, no son instrumentos suficientemente probados en la intervención de la ANS. Finalmente se discute la evaluación de ANS hispanoparlante y sus posibles mejoras.

Palabras clave: Autolesión no suicida, Evaluación, Revisión, Clínica, Instrumentos.

The conceptualization and assessment of non-suicidal self-injury (NSSI) has varied over the years. Clinical knowledge about NSSI depends on the evaluation and the sample investigated. However, the majority of the reviews on this subject do not have Spanish-speaking samples. This study aims to review the concept and clinical assessment of NSSI in the Spanish-speaking population from a comprehensive point of view. Through a systematic review, including the gray literature, 8 validated instruments were found in Spanish-speaking samples. These instruments are described in terms of their development, format, the characteristics that they measure, and their clinical and psychometric applicability. The majority are adaptations for community adolescents, and in terms of creation and adaptations Mexicans are noteworthy. Although these instruments do have clinical potential, they have not been sufficiently proven for NSSI intervention. Finally, Spanish-speaking assessment of NSSI and possible improvements are discussed.

Key words: Nonsuicidal self-injury, Assessment, Review, Clinical, Instruments.

Non-suicidal self-injury (NSSI) is defined as deliberate, self-inflicted damage to body tissue without suicidal intent and for purposes not socially or culturally sanctioned (International Society for the Study of Self-injury, 2006). However, the phenomenon of self-injury has generated many definitions and conceptualizations in its approach (Sutton, 2007). As such, the terms used have evolved from suicide to parasuicide and self-mutilation and to the one most commonly studied today: NSSI (Nock & Favazza, 2009) and deliberate self-harm (DSH), which includes suicidal and risky behavior (Hawton et al., 2015).

The different prisms have enriched the knowledge about self-injury, but they also show the difficulty of studying and understanding it. The assessment of NSSI must be adapted to the population. However, most current reviews do not contemplate the assessment of NSSI in Spanish-speaking samples (Chávez-Flores et al., 2019; Klonsky & Lewis, 2014). Therefore, the aim of this study is to review the concept and clinical assessment of NSSI from a comprehensive point of view, with special focus on the Spanish-speaking population. To this end, the current literature on the concept and assessment of NSSI was reviewed. Instruments were identified that assess NSSI with clinical relevance and report data on their validity and reliability in Spanish with any age group.

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CONCEPTUALIZATION AND ASSESSMENT

Definition and magnitude of the problem

Between the 60s and 80s of the last century there was the premise that those who self-injured usually had a very disabling mental disorder linked to domestic violence, more specifically, to sexual abuse. But, in the 1990s self-injury began to be reported in functional outpatients, followed by a large wave of young people with very early onset (Walsh, 2012). This wave was reported by the scientific literature and by the media (Trewavaset et al., 2010). This interest crystallized in the consolidation of teams and specific research lines on NSSI especially in the 2000s (International Society for the Study of Self-injury, 2006). Even the Diagnostic and Statistical Manual of Mental Disorders (DSM) included NSSI in 2013 as a diagnosis under revision (DSM 5; APA, 2013).

Numerous studies have been conducted in recent years to understand the magnitude of NSSI. It has been proposed that the number of cases of self-harm is increasing (Nock, 2014). A meta-analysis involving 18 countries, including Spain, reported a high international lifetime prevalence of NSSI in non-clinical samples, with higher prevalence in adolescents (17.2%; 10-17 years) and young adults (13.4%; 18-24 years) compared to adult population (5.5%) (Swannell et al., 2014). However, the prevalence figures in adolescents range widely, in part because of the various ways of assessing NSSI (7.5-46.5%; Cipriano et al., 2017). The few studies on the incidence of self-injury suggest an increasing prevalence. For example, the lifetime prevalence of NSSI in first-year university students increased from 16% to 45% between 2008 and 2015 (Wester et al., 2018). Among Spanish adolescents, figures have been



found of more than half of them reporting some NSSI in the past year, with one third being considered severe (e.g., cutting; Calvete et al., 2015), and in adolescent outpatients approximately one in five performed NSSI at least once in their lifetime (Neira et al., 2015).

The different conceptualizations, populations studied, and evaluation systems have made a more refined consensus on the prevalence of NSSI complicated. Moreover, as they do not allow a clear representation of the real prevalence, they make it difficult to determine its incidence. Methodological factors have been found to contribute half (51.6%) of the heterogeneity in prevalence figures (Swannell et al., 2014). Thus, the form of assessment can increase or decrease the prevalence estimate, with higher prevalences being associated with assessment by checklist (vs. yes-or-no response format; Morales et al., 2018), specifying a greater number of methods, incentives for participation, anonymity, self-administered format (vs. interview), and focus on NSSI or DSH (vs. other constructs).

Although it is a behavior that begins in adolescence (13-16 years; Muehlenkamp et al., 2018) and declines in young adults (Plener et al., 2015), its intervention should not be overlooked, as a single episode of NSSI correlates significantly with comorbid conditions such as suicide and psychological distress (Whitlock et al., 2006). Even the adolescents with less frequency and unstable repetition have also been associated with higher levels of stress, anxiety, NSSI, and difficulties in emotional regulation in adulthood (Daukantaitė et al., 2020).

The risk factors most predictive of NSSI are having a previous history of NSSI, belonging to personality cluster b (antisocial, borderline, histrionic, and narcissistic), and hopelessness, as well as previous suicidal thoughts and behaviors, exposure to peer NSSI, diagnosis of depression, depressive symptoms, eating disorder, female gender, externalizing psychopathology, internalizing psychopathology, affective dysregulation, family-related variables, peer victimization, and negative self-concept (Fox et al., 2015; Valencia-Agudo et al., 2018). Although psychiatric comorbidity is not common in community youth, NSSI is also seen in post-traumatic stress disorder, anxiety, dissociative, obsessive-compulsive, and antisocial personality disorders (Walsh, 2012).

An important aspect that has been the subject of study is the relationship between NSSI and suicide. According to the interpersonal theory of suicide, self-injurious behavior may increase the likelihood of committing suicide (Joiner et al., 2012). On the other hand, NSSI may serve as a suicide avoidance behavior (Klonsky, 2007; Kraus et al., 2020; Suyemoto, 1998). Although NSSI and suicide have been suggested to be part of one dimension, the correlates of the two concepts consistently differ across the research (Walsh, 2012): in NSSI the physical harm is small, repetitive, and more than one method is often used; NSSI is estimated to be 40 times more prevalent and its intentionality is to modify consciousness, but not to eliminate it; the psychological pain is considered intermittent and uncomfortable rather than long-lasting and unbearable, other options are found, and it is a temporary solution. Therefore, the assessment for suicide differs from that for NSSI in its defining characteristics.

Assessment determines the evidence

Numerous models have been developed to explain NSSI, with emphasis on different aspects such as interpersonal factors (Suyemoto, 1998), suicide (Joiner et al., 2012), cognition and emotion (Hasking et al., 2017), neurological functions (Liu, 2017), and an integration of factors (e.g., Nock, 2014). However, the self-injurious episode is usually described similarly in most models. Broadly speaking, it begins with increasing distress that is neither resolved nor endured. The impulse to self-injure increases until the self-injury is performed, at which point the psychological tension subsides, relieving the person. The most consensual evidence currently available explains that this reinforces NSSI as an emotional modulation strategy (Nock, 2014).

Current assessment instruments are sensitive to different conceptualizations of self-injury. Thus, self-injury research has generated different assessment instruments resulting from the combination of (1) the different ways of measuring (e.g., self-report/interview or dichotomous/Likert), (2) occurrence (e.g., last year/lifetime), (3) the concept of self-injury (e.g., NSSI/DSH), (4) specific aspects of the self-injury spectrum of research interest (e.g., functions or urgency), and (5) type of population (e.g., clinical/community or a certain culture). Thus, we have a large number of instruments to measure self-injury, many of which measure NSSI. However, most of them have not been tested for validity and many of them have not been tested for reliability (Faura-Garcia-et al., 2021).

Evaluate to intervene

A correct assessment must measure what it intends to measure (validity) and it must do so in an accurate, stable, and consistent manner (reliability). Moreover, it must not be harmful. This fear has led to ethical proposals for NSSI research with minors (Hasking et al., 2019; Singhal & Bhola, 2017). A meta-analysis reports that asking adolescents about NSSI does not increase frequency or urgency, rather the probability of help (Polihronis et al., 2020).

The assessment, intervention, and conceptualization of NSSI have also been mutually influenced. Emotional regulation group therapy for NSSI (Gratz, 2007) emerged after the research of the experiential avoidance model (Chapman et al., 2006) with instruments previously created by the same authors (Deliberate Self-Harm Inventory; Gratz, 2001). In contrast, dialectical-behavioral therapy (Linehan, 1993) led to the creation of the Suicide Attempt Self-Injury Interview (Linehan et al., 2006). More recently, following the approach of NSSI recovery through stages of change (Kruzan & Whitlock, 2019), its authors are creating the timely scales to assess Decisional Balance, Processes of Change, and Self-Efficacy for NSSI (Kruzan et al., 2020). In other cases the results of other instruments have generated a model and this in turn a new instrument, for example the factorization of the Functional Assessment of Self-Mutilation (Lloyd, 1997), led to the 4-function model of NSSI (Nock & Prinstein, 2004) and later the design of the Self-Injurious Thoughts and Behaviors Questionnaire-Nonsuicidal (Nock et al., 2007).



SPANISH ASSESSMENT INSTRUMENTS

A search was conducted in MEDLINE, EMBASE, PsycTESTS, PsycINFO 1806 - present, ProQuest Psychology Database, Psychology Database, and PsycARTICLES 1894 - present, until August 2020. The search filter was: («non-suicidal self-injury» or «self-destructive behavior» or «self-injurious behavior» or «self-harm» or «deliberate self-harm» or «self-inflicted wounds» or «self-mutilation») and («assessment» or «instrument» or «measurement» or «measure» or «test» or «questionnaire» or «interview» or «scale») and («reproducibility» or «methods» or «validity» or «valid» or «reliability» or «reliable» or «sensitivity» or «psychometrics*» or «item response theory»). In relation to the gray literature, we searched ProQuest Dissertations & Theses Global, OpenGrey, and Google Scholar, as well as reference manuals on self-injury, its assessment, intervention, and clinical treatment.

Eight instruments were selected from the search performed. Although most of them were created for basic research purposes, the ones with clinical potential and data on their validity and reliability in Spanish speakers were selected: *Cédula de Autolesiones sin intención suicida basada en el DSM-5 - Métodos*, *Cédula Diagnóstica de Autolesiones*, *Cuestionario de Riesgo de Autolesión*, *Functional Assessment of Self-Mutilation*, *Inventory of Statements About Self-Injury*, *Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents*, *Self Harm Questionnaire*, and *Self-Injurious Thoughts and Behaviors Interview*. The Mexican version of the *Deliberate Self-Harm Inventory* (Castro Silva et al., 2017) was not included due to insufficient validity and reliability data.

Cédula de Autolesiones sin intención suicida basada en el DSM-5 - Métodos (Self-Injury Questionnaire without Suicidal Intent based on DSM-5 – Methods; CA-M)

The *Cédula de Autolesiones* (Albores-Gallo et al., 2014) was developed in a sample of Mexican adolescents, and it is based on the DSM-5 diagnosis of NSSI, including 63 items. Although they did not report sufficient psychometric data, later Vilchez (2019) validated only the methods of self harm (CA-M) section in Ecuadorian university students. The CA-M is a self-report with 12 items. It measures method and frequency by asking «Have you ever intentionally hurt yourself to the point of causing bleeding or pain in the following way?» across 12 methods (e.g., cutting your skin) with a 5-point Likert response from “never” to “always”. It has two dimensions: self-injury under the skin and above the skin. The evidence on its internal consistency is positive but limited, and, although two factors were found, there is insufficient data to assess its validity (Faura-Garcia-et al., 2021). One limitation is that the methods section by itself does not distinguish NSSI from self-injury with suicidal intent, the differentiation of which requires the full instrument (Albores-Gallo et al., 2014), which moreover has not been validated.

Cédula Diagnóstica de Autolesiones (Self-Injury Diagnostic Form; CDA)

The CDA is a self-report developed and validated by Emiliano (2014) with a community and clinical sample of Mexican adolescents. It was designed for the identification of suicidal and non-

suicidal self-injury through a diagnostic algorithm based on the DSM-5 proposal of NSSI. Most of its 84 items have a yes/no format and its administration takes 10 to 15 minutes. It is one of the instruments in Spanish that evaluates the most characteristics of NSSI: functions, frequency, method, history, urgency, suicide, drugs, measured and psychological assistance, first time, ideation, disclosure, group practice, pre- and post-episode, NSSI interference, cessation, affect, area, and risk behaviors. It proposes three dimensions (methods, thoughts, and dysfunction) capable of discriminating between the clinical and community sample, which have cut-off points with adequate sensitivity and specificity. It showed excellent internal consistency and favorable correlations for concurrent and divergent validity. Despite the favorable psychometrics, it did not pass the exhaustive screening, it has only been validated on one occasion, and no other studies using the instrument have been found (Faura-Garcia-et al., 2021).

Cuestionario de Riesgo de Autolesión (Self-Injury Risk Questionnaire; CRA)

Recently designed through a literature review, the CRA aims to assess the risk of self-injury by measuring the intention to initiate self-injurious behavior, function, frequency, method, first time, suicide intention and attempt, difficulty in stopping, and group influence (Solis-Espinoza & Gómez-Peresmitré, 2020). Its 17 self-reported items were validated in Mexican adolescent students with intention to self-harm. In addition to having an open-ended response, it evaluates four methods and 9 motives for self-injury. The occurrence of self-injury at any time in life is measured through four different items that enable the classification of self-injury as NSSI. Three sub-dimensions were found: frequency (number of episodes and 4 Likert responses from “0 times” to “more than 6”), addictive effect (5 Likert responses from “not at all” to “very much”) and social contagion (yes/no). With a single test, its internal consistency has shown limited positive evidence and limited negative evidence for structural validity (Faura-Garcia-et al., 2021).

Evaluación Funcional de la Automutilación (Functional Assessment of Self-Mutilation; FASM)

This is a self-report developed through literature review in clinical and normative population (Lloyd, 1997). It has been validated in North American clinical samples of adolescents and adults (Klonsky et al., 2015; Nock & Prinstein, 2004). It is a highly evaluated instrument with the objective of knowing its subdimensions for classifying the functions of NSSI. It was validated in Spanish community adolescents and young adults (Calvete et al., 2015), finding four sub-dimensions (negative and positive automatic reinforcement, and negative and positive social reinforcement), which are organized in two groups (automatic and social reinforcement). The 37 items of the Spanish adaptation evaluate, first through ten forms of self-injury, the occurrence, obtaining of medical treatment, and frequency in the last year using a 5-point Likert scale (0 times, 1 time, 2-5 times, 6-10 times and > 11 times), after which it asks how long the behavior was contemplated previously, age at the first episode, once in life occurrence, occurrence under the influence of



drugs or alcohol, degree of physical pain during the self-injurious episode, and whether there was suicidal intent. Finally, it assesses the functions by asking the frequency of 22 reasons for self-injury ("never", "rarely", "sometimes", and "quite often"). It has shown positive and limited evidence regarding its structural validity and internal consistency (Faura-Garcia-et al., 2021).

Inventario de Declaraciones sobre Autolesión (Inventory of Statements About Self-Injury; ISAS)

The ISAS was designed in self-report format based on the literature review on the functions of NSSI (Klonsky & Glenn, 2009). It has shown strong positive evidence on hypothesis testing for construct validity, moderate positive evidence for internal consistency, and limited positive evidence for criterion validity. It has been validated in Spaniards adolescents and adults with eating disorders (Pérez et al., 2020) and Mexican university students with a history of NSSI (Castro Silva et al., 2016). Through 39 items it evaluates, first, the frequency (number of times) of 12 intentionally performed self-injurious methods without suicidal intent throughout life, after which it measures urgency, history, pain, group practice, first time, and intention to stop, followed by 13 functions with a three-point scale ("not relevant", "somewhat relevant", and "very relevant"). While in Spaniards the two subdimensions reported by its creators (interpersonal and intrapersonal functions) were detected, in Mexicans seven were detected. Both versions have shown limited positive evidence regarding their internal consistency and hypothesis testing of construct validity, while the Spanish version also shows evidence for structural validity and reliability (Faura-Garcia-et al., 2021). Additionally, it has been adapted to Chilean adolescents (Castro & Kirchner, 2018), but there were not sufficient psychometric data for evaluation.

Impulsividad, Autolesión No Suicida e Ideación Suicida en Adolescentes (Impulse, Self-harm and Suicide Ideation Questionnaire for Adolescents; ISSIQ-A)

The ISSIQ-A is an adolescent version of the ISSQ (Carvalho et al., 2015), created through literature review. It includes 56 items with four-point scale response ("it never happens to me" to "it happens to me all the time"). It is divided into four parts that measure impulse, self-injury, risk behavior, and suicidal ideation. It assesses frequency, method, function, first time, group practice, stopping, and pain. Although it measures the broad concept of self-injury (conceptualized as DSH), the section on suicidal intent allows the assessment of NSSI. In addition, a Mexican version of the ISSQ validated in adolescent and young adult students has recently been adapted (Chávez-Flores et al., 2018). This version showed limited positive evidence regarding its structural validity, internal consistency, and hypothesis testing of construct validity, and limited negative evidence of its reliability (Faura-Garcia-et al., 2021).

Cuestionario de Autolesionismo (Self Harm Questionnaire; SHQ)

The SHQ is a self-report focused on identifying self-injurious behavior and ideas and assessing the last self-injurious episode (Ougrin & Boege, 2013). It has been adapted for Mexican

adolescents (García-Mijares et al., 2015). It takes approximately 15 minutes to complete 15 items. The first three screening questions determine the presence and frequency of suicidal and non-suicidal self-injurious behavior, while the following questions assess the last self-injurious episode in relation to when it occurred, the method, motivation, experience during the self-injury, its purpose, substance use, planning, consequences, execution, and disclosure. Although it asks about DSH, it can be used to report on NSSI since it asks about suicidal intent. The Mexican version has a sensitivity to detect self-injury of 97.96% and a specificity of 54.39%. Predictive values were similar to the original ones (PPV: 64.86%, NPV: 96.88%).

Escala de Pensamientos y Conductas Autolesivas (Self-Injurious Thoughts and Behaviors Interview; SITBI)

The SITBI is an extensive 169-item structured interview (Nock et al., 2007) that assesses NSSI thinking and behavior in its last two modules (suicidal ideation, suicidal plan, suicidal gestures, suicide attempts). NSSI thinking and then NSSI behavior are assessed with respect to presence (functioning as a screen to continue the interview or not), frequency (number of episodes in lifetime, year, month, week), 11 methods, age of onset, four functions, 10 precipitants, severity of episode, drug use at the time, medical treatment, social influences, intensity, and the respondent's estimated probability of future NSSI. Most are answered with a number or using a five-point scale. This instrument has been widely used and has validated adaptations in Spanish, German, and Italian, in addition to the short, short self-report, and Hebrew versions, whose psychometrics we have not been able to access. The Spanish version validated in adults hospitalized in psychiatric units (García-Nieto et al., 2013) has shown limited positive evidence of hypothesis testing of construct validity and limited negative evidence of reliability (Faura-Garcia-et al., 2021).

CONSIDERATIONS ON THE SPANISH-SPEAKING ASSESSMENT OF NSSI

The review shows that most of these instruments are adaptations of others created with non-Spanish-speaking samples of community adolescents and are less than five years old. The creation (and adaptation) with Mexican participants stands out, perhaps due to the research and media attention on self-injury in the last decade in the country. However, some of the research is of low dissemination and scientific impact. Although there is positive evidence on the validity and reliability of most of the instruments, more studies are needed to examine their psychometric properties. In terms of their clinical applicability, screening and diagnosis stand out, but they lack adequate properties for assessment during clinical intervention. Although they do not measure the full range of characteristics assessed by specific NSSI instruments with clinical relevance, they do include most of them, such as function, frequency, method, previous history of NSSI, and the urgency or impetus to perform it (Faura-Garcia-et al., 2021).

There are instruments with clinical potential that have been created recently with Hispanic populations, but they are not sufficiently proven instruments for intervention (e.g., without sensitivity to change or identification) nor have they been designed for specific intervention



for NSSI. However, it is important to note that there also do not appear to be instruments that have been shown to be sufficiently suitable for intervention in NSSI in other languages (Lengel & Denise, 2019).

As most instruments are self-reported, it is possible that the assessment of NSSI is susceptible to reporting bias, as it depends on the respondent's honesty, memory, awareness, and understanding of the items (Fliege et al., 2006). On the other hand, the low help solicitation and stigma that are common in self-injury (Rowe et al., 2014) may increase the reliability of self-report compared to interview.

Evaluation Depends on Sample and Researcher Country

The few cross-cultural studies on self-injury have found some cultural and cross-country differences (Brunner et al., 2014; Madge et al., 2011). An evaluation that considers not only the age of the sample, but also its country and culture, therefore seems necessary. Approximately one in six validations of NSSI instruments has been in Spanish (Faura-Garcia-et al., 2021).

Historically, DSH has been most studied in Europe and Australia and NSSI in the United States and Canada. Although the recent entry of new countries has blurred the two blocks (Mannekote Thippaiah et al., 2020), it has been suggested that the lower prevalence of NSSI in the UK is related to the methodology used (Swannell et al., 2014).

An element of complexity lies in the fact that the same instrument often assesses self-injury by reporting DSH, NSSI, and suicide at the same time. Thus, it is at the discretion of the researcher to decide which of the cases detected by the assessment instrument correspond to which concept of self-injury. These decisions may not be conscious, and they may be difficult and/or opaque to the reader. This would question the replicability of the results and could also explain some disparities between similar studies (Washburn, 2019). In order to be able to correctly interpret the research results, it seems indispensable to have standardization of assessment, a thorough understanding of assessment, and correct reporting of results.

Possible Improvements

It is important to promote the creation of instruments that are not based on the mere description of the behavior, its relation to suicide, or diagnostic classification, as is the case with older instruments (Faura-Garcia-et al., 2021). Instead, they should be created based on well-defined explanatory conceptualizations, *ad hoc* creation, or improvement of already validated instruments. Another handicap to be overcome is the scarce study of their psychometrics, the indiscriminate use (e.g., not being appropriate for the sample), or the creation of new instruments as a result of instrumental amalgamations without justification.

In addition, it is necessary to investigate how the difference in format determines the measurement. In order to know the incidence of reporting bias in self-reported formats and, on the other hand, the disadvantages of the interview, we propose the comparison of the two formats together with other sources of information (e.g., tutors) during validation. The tendency to psychometrically evaluate only parts of the instrument should also be avoided. NSSI assessment and

treatment would be improved through other fields of research (e.g., new technologies), designing specific instruments for intervention and prevention, as well as comparison between instruments and over time.

In summary, future directions on improving NSSI assessment in Spanish-speaking population should aim at the much demanded standardization (Klonsky & Lewis, 2014), knowing the current limitations of the instruments, and through the testing of concepts and definitions for self-injury, validation, and knowledge of psychometric properties, as well as their adequacy or creation for use in the field of intervention and prevention.

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CONFLICT OF INTEREST

There is no conflict of interest.

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