

Adolescent suicide risk screening scale: Evidence of content validity

Escala de cribado del riesgo suicida en adolescentes: Evidencias de validez de contenido

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Abstract

Suicide is considered a serious and preventable public health problem. Psychometric evaluation using validated suicide risk tools allows for more effective prevention of suicidal behaviors. This study aims to assess the content validity of a set of items measuring key risk factors for self-harming behaviors (both suicidal and non-suicidal) in adolescents. Content validity will be evaluated through clarity, representativeness, and relevance indicators. An instrument was designed by reformulating the content of a selection of 413 items grouped into ten dimensions. The participants were clinical psychology professionals selected by convenience. The Osterlind Index was then used to analyze the representativeness and relevance of the data. Frequency analyses were carried out to assess clarity. The results show adequate values of representativeness, clarity, and relevance for each of the selected items.

Keywords: content validity, suicide, self-harm, adolescents.

Resumen

El suicidio es considerado un grave problema de salud pública entre adolescentes. La evaluación psicométrica mediante herramientas validadas del riesgo al suicidio permite prevenir con mayor eficacia las conductas suicidas. Este estudio pretende obtener evidencias de validez de contenido a través de indicadores de claridad, representatividad y pertinencia sobre un conjunto de ítems correspondiente a los principales factores de riesgo asociados a las conductas autolesivas (suicidas y no suicidas) en adolescentes. Se diseñó un instrumento a partir de la reformulación del contenido de una selección de 413 ítems agrupados en diez dimensiones. Los participantes fueron profesionales de la psicología clínica seleccionados por conveniencia. Para el análisis de los datos de representatividad y relevancia se utilizó el Índice de Osterlind. Se realizan análisis de frecuencia para la valoración de la claridad. Los resultados mostraron valores adecuados de representatividad, claridad y relevancia para cada uno de los ítems seleccionados.

Palabras clave: validez de contenido, suicidio, autolesiones, adolescentes.

1. Introduction

Suicide is currently a serious public health problem worldwide, accounting for about half of all violent deaths and a high emotional and personal cost for the family and economic cost for society as a whole. This problem is even more evident among adolescents, becoming one of the two leading causes of unnatural mortality in the population among young people (Pan American Health Organization, 2023).

Suicidal behavior is understood as any act that intentionally seeks to cause death (DeBastiani & De Santis, 2018). Numerous literature has shown that suicidal behavior is a complex and multicausal phenomenon (Socha-Rodríguez et al., 2020) that can be expressed through various behaviors such as communication of death, desire, ideation, planning, intention, or completed suicide (Huguet-Cuadrado, 2023).

About 800,000 people commit suicide each year, and for every person who does so, at least 20 have attempted it, and many more have at least thought about it, according to data from the Pan American Health Organization (2022). The literature reports that the highest rates of completed suicide have been recorded among older males, while young women have higher rates of attempts; however, in recent years, it has been observed that the rates among adolescents and young people have been increasing, becoming the highest risk group at present. Suicide is the third leading cause of death in people aged 15 to 19 years, and 90% of cases worldwide are contributed by low- and middle-income countries (Pan American Health Organization, 2022). In the Americas, the estimated rate was 9.64 per 100,000 inhabitants for the year 2019, representing a 28% increase since 2000 (Pan American Health Organization, 2021). In this context, the Dominican Republic is among the countries with stable average suicide rates over the last five years (5 to 6 per 100,000), even below the average for the Americas region (8.8 per 100,000). However, there has been an increase in cases reported by adolescents and young people between the ages of 10 and 19 (National Statistics Office, 2024). This makes

this population group one of the most vulnerable groups.

In addition to suicidal behaviors, a significant number of young people and adolescents present non-suicidal self-injurious behaviors. This type of behavior refers to deliberate, voluntary acts of self-inflicted pain, destructive or injurious, without intent to die (Faura-Garcia et al., 2021). The Diagnostic Classification Manual of Mental Disorders, in its fifth revision (American Psychological Association, 2013), places special emphasis on the fact that young people who present self-injury do not have the intention of dying. Therefore, Self-injury without Suicidal Intent (NSSI) is included in a separate section. However, it is reported that there is a significant association between self-injurious behavior and suicidal behavior (Kirchner et al., 2011; Nock et al., 2006; Villa et al., 2016). A person with a previous history of self-injurious behaviors is almost 25 times more likely to die by suicide than the general population (Ayuso-Mateos et al., 2012). Among young people, non-suicidal self-injurious behaviors include cutting different parts of the body (arms or legs), also called "cutting," hitting themselves with blunt objects or against walls, scratching, biting or pinching, hair pulling, ingestion of drugs and other substances, or burns. These behaviors come to affect a range of the adolescent population, comprising between 2% and 4% (Mosquera, 2016). Self-injurious behavior is more prevalent in females, with an average onset age of around 15 years. The most commonly used form of harm is self-mutilation or cutting (De Leo & Heller, 2004; Laukkanen et al., 2009; Nixon et al., 2008; Ross & Heath, 2002). Studies report a lifetime prevalence of self-injurious behavior from 11.5% and up to 46% of adolescents studied; this data varies depending on the characteristics of the population and the instruments used (Brunner et al., 2013; Laukkanen et al., 2009; Nixon et al., 2008; Obando et al., 2019). Despite this wide range, this rate is considered to have remained stable between 2005 and 2011 (Muehlenkamp et al., 2012).

The origin of suicide and self-harm in the adolescent population is multicausal and is associated with numerous risk factors (Park et al., 2020). Meta-analysis studies have highlighted substance abuse (alcohol, drugs), affective disorders (depression, anxiety, low self-esteem), sexual and/or physical abuse, and bullying as the main risk factors, with the risk of attempted suicide being more frequent among females and completed suicidal behavior among males. Similarly, other risk factors associated with increasing the likelihood of committing suicide or self-harm are included, such as having an eating disorder, having previous suicide attempts, having problems in interpersonal relationships, having a psychotic disorder, and having non-normative sexual orientation, among others (Caballero Díaz, 2023; Park et al., 2020). With development and globalization, other unconventional factors also emerge that could increase the risk of suicide and self-injury, such as imitative behavior or social group behaviors. In the current context, there are models of behavior spread in social networks among peer groups that use games in the form of "challenges" whose aim is to encourage and reinforce self-injury, violent behavior, and even suicide in groups of adolescents and young people. In this sense, Kushner and Sterk (2005), regarding the use of social networks and suicidal or self-injurious behavior, point out that the current styles of modern life are capable of altering social cohesion, increasing suicide risk and mortality. Therefore, the dissemination of these practices through the Internet seems to be a promoting factor for suicidal and self-injurious behavior, especially for the most vulnerable groups (Arendt et al., 2020; Pirkis et al., 2018).

The World Health Organization recognizes that it is important for public health to identify promptly the suicidal risk that a person may have, trying to reduce the harm and potential death. This is coupled with the low percentage of adolescents who seek help for suicidal ideation, which hinders the timely detection of those young people at risk of suicide, as well as the possibility of preventing suicidal acts. In this sense, it is necessary to strengthen the ability to detect suicidal risk through psychometric tools that provide valid and reliable information in particular contexts.

The rigorous assessment of suicide risk makes it possible to identify aspects linked to the person's sphere of life in order to anticipate the occurrence of suicidal or self-injurious behavior to reduce the harm and mitigate the impact it could have. Risk assessment is a valuable resource in the field of suicide prevention and timely care. For this purpose, psychological measurement tools have been designed mainly to detect risk factors; however, their scope has been minimal (Kessler et al., 2020). In part, due to the limitations presented by these tools: a) focus exclusively on the specialized clinical setting and psychopathological variables (Rangel-Garzón et al., 2015); b) lack integration of psychosocial factors that combine psychometrically and empirically based decision-making algorithms; c) lack risk management and management proposals for decision-making; d) form part of intervention programs that only allow restricted use; and e) lack of validation in specific populations, such as the Dominican population.

Due to the high percentage of suicidal behavior in young people and adolescents and the low probability that they seek help, it is necessary to have effective, valid, and reliable tools that allow the assessment of suicidal risk in Dominican adolescents to be used in the clinical setting. A risk assessment instrument must possess various psychometric properties, one of which is content validity, which in this case refers to the degree of adequacy of the sampling that ensures the instrument measures the universe of possible behaviors of the object it is intended to measure (Cohen & Swerdlik, 2001). The evidence of content validity of a test is an essential psychometric indicator, which is obtained, above all, through the strategy of expert judgment, especially when the measurement instruments have not yet been validated in specific populations or contexts.

This study aims to obtain evidence of content validity of a set of indicators corresponding to the main risk factors associated with self-injurious behaviors (suicidal and non-suicidal) in adolescents. To obtain this type of evidence, the judgment of experts from the fields of research and clinical practice in the child and adolescent population will be utilized.

2. Materials and methods

2.1. Participants

The sample consisted of a total of 14 professionals, of whom only eight persons completed the evaluation, and one was excluded due to a lack of response to all the items. Therefore, the final sample consisted of a total of 7 people. Of these, six were female, and one was male, with two from Spain and five from the Dominican Republic. The participants were selected incidentally by the objectives of this study. Inclusion criteria were established as follows: a) to be professionals in the field of clinical psychology; b) to have a level of education corresponding to a doctorate or master's degree; c) to have more than 5 years of experience in research and clinical practice with

the child and adolescent population; and d) to participate voluntarily.

2.2. Instruments

Content validity scale for risk factors for suicidal behaviors (ad hoc development). An instrument was designed by grouping a selection of 412 items corresponding to the main risk factors associated with self-injurious behaviors. The content of the items originated from various assessment instruments, from which the original items were reformulated to create the present scale. The following table presents the dimensions explored, along with the instrument from which the content of the items was extracted (Table 1).

Table 1: List of dimensions and instruments
Source: Own elaboration.

Psychopathological factors	Evaluation System for children and adolescents, SENA (Sánchez, et al., 2016).
Cognitive factors	Columbia Scale (Posner et al., 2011) . ISNISS Protocol (Influence of Social Networks and Internet on self-injurious and suicide (Carretero, 2024).
Historical or family background factors	Ad hoc questionnaire
Emotional factors	Beck's Hopelessness Test (Beck et al., 1974).
Adverse or potentially traumatic life events	Life events checklist (Gray et al., 2004). EBIP-Q and from ECIP-Q (Ortega-Ruiz et al., 2016).
Information and communication technology factors	ISNISS Protocol (Influence of Social Networks and Internet on self-injurious and suicide (Carretero, 2024).
Social, interpersonal and family factors	SENA Test (Sanchez, et al., 2016). INQ-Belongeness (Van Orden et al., 201) .0
Personality factors	SENA Test (Sanchez, et al., 2016).
Volitional and motivational factors	Entrapment and defeat scales (Gilbert and Allan, 1998) The Acquired Capability for Suicide Scale (Smith et al., 2010). Discomfort intolerance Scale (Schmidt at al., 2006) Interpersonal Needs Questionnaire (INQ) (Van Orden et al., 201) 0

Considering the cultural and linguistic adaptation of these tests, the Spanish version validated in previous studies was included in the protocol. The tests for adverse or potentially traumatic life factors and motivational volitional factors were adapted from their original English version and translated into Spanish, then reviewed by expert, native Spanish-speaking mental health professionals.

The different items were grouped into a total of nine (9) dimensions, each of which included different items related to certain risk factors mentioned in the literature: 1) Psychopathological Factors (PSF). It groups the indicators of the presence of depression, anxiety, substance use, posttraumatic symptomatology, obsession-compulsion, presence of borderline personality disorder, and somatic complaints; 2) Cognitive and Behavioral Factors (FCC) linked to the indicators of: suicidal ideation, suicidal planning, suicidal attempts and self-injurious behavior; 3) Historical or Family History (AHF), encompasses indicators of history of suicidal behavior in the family; 4) Emotional Factors (FEM), groups indicators of: level of hopelessness and reasons for living; 5) Adverse or Potentially Traumatic Life Factors (FVAT), includes indicators of: physical, psychological or sexual abuse, experiences of separation or rejection, bullying and cyberbullying, exposure to other suicides. 6) Information Technology Factors (FTICs), which include the indicator of consumption of materials promoting and disseminating suicidal behavior through different media (television, radio, Internet); 7) Social, Interpersonal, and Family Factors (FIF), which covers the indicators: family problems, problems with school, problems with peers, social support; 8) Personality Factors (PF), corresponding with the indicators of: level of self-esteem, hyperactivity-impulsivity, anger control problems, rigidity, emotional regulation; 9) Volitional-motivational factors, covering the indicators of: entrapment and defeat (expiration), acquired capacity (perceived efficacy) for suicide, intolerance to discomfort, perception of belonging and overload.

Each of the items was assessed on three criteria (i.e., clarity, representativeness, and relevance), each of which was accompanied by a scale,

respectively: the clarity criterion was assessed on a dichotomous scale (Yes/No), and the representativeness-relevance and relevance criteria were assessed on a scale of three options (high, medium and low). All of them allowed the inclusion of comments or conditions for improvement in an annex section that the expert could add in addition to the scale score. Each of the criteria to be evaluated by the experts is described below:

- Clarity refers to whether the item is correctly formulated and whether you understand its meaning. There are two possible response options: No (Unclear, the item is ambiguous, confusing, or does not clearly express what you are trying to assess) and Yes (Clear, the item is clear).
- Representativeness. This criterion refers to whether the item is representative, i.e., characteristic or typical of the dimension to which it has been assigned. There are three possible response options: 1, "low degree of representativeness," 2, "medium degree of representativeness," and 3, "high degree of representativeness."
- Relevance. Refers to whether the item is relevant or important for measuring the dimension to which it has been assigned. 1 "Not relevant, the item can be eliminated without affecting the measurement of the dimension"; 2 "Not very relevant, the item has some relevance, but assesses very secondary aspects of the dimension or is only indirectly related to it"; 3 "Relevant, the item reflects important aspects of the dimension assessed or directly related to it."

2.3. Procedure

Once the participants had been selected, they were sent an email invitation to participate in the study, along with instructions for completing a double-entry digital template. The template included rows for the components of each dimension to be evaluated and columns for each of the criteria to be scored. At the end of the review document, a space was included for the evaluator to indicate any observations and appreciations they deemed necessary for each item.

Once the form was completed, the participant sent their responses via email to the researcher for analysis.

2.4. Data analysis

The Osterlind index (Osterlind, 1998) was used to analyze the representativeness and relevance data. An Osterlind index is calculated for each item of the dimensions.

The Osterlind index is often used to measure the content validity of items through expert opinions. This tool is helpful in the initial phases of the study, as it aims to ensure that the items accurately reflect the concepts defined theoretically (Sanduvete-Chaves et al., 2014).

Items scoring $p \geq 0.6$ on the Osterlind index could be included in the proposed protocol. For clarity, data analysis, frequencies, and percentages were used.

3. Results

In the psychopathological factors dimension (Table 2), 41 items obtained scores between .67 and .91. Regarding relevance, a total of 25

items were considered relevant or important for measuring this dimension, of which 15 obtained scores between .67 and .83.

Table 2: Index of representativeness, relevance and clarity of psychopathological factors.

Source: Own elaboration.

	Representativeness Index	Relevance Index
Depression		
Enjoying things less than before	1	1
Being sad/sad	1	1
Feelings of loneliness	.833	.667
Thinking that life has no meaning	.833	.667
Death Wishes	.833	.667
Thinking that no one cares	.833	.667
Crying	.833	.667
Thinking you are unlucky	.917	.667
Anxiety		
Ruminating/intrusive preoccupation	.833	.667
Overwhelmed by the problems	.833	.667
Anxiety crisis	.917	.833
Fear of making a mistake	.745	.833
Substance use		
Smoking marijuana or joints with friends	.833	.667
Drinking alcohol with friends	1	1
Post-traumatic symptomatology		
Affected by the events experienced	.833	1
Embarrassment for talking about past events	.917	.833
Intrusive images	1	1
Intrusive and repetitive thoughts and images	.833	.667

Obsession-compulsion		
Compulsions of order	1	1
Anxiety if you avoid compulsions	1	.667
Fear of getting dirty or contaminated	.917	1
Compulsive checking	1	.667
Presence of somatic complaints		
Morning fatigue	1	1
Headache	1	1

In the dimension of cognitive and behavioral factors (Table 3), thirteen items were considered representative, characteristic, or typical of this dimension, of which seven obtained scores

between .6 and .8, and six obtained a score equal to 1. On the other hand, thirteen items were considered relevant, with six scoring between 0.6 and 0.8 and seven scoring 1.

Table 3: Index of representativeness and relevance of cognitive and behavioral factors.

Source: Own elaboration.

	Representativeness index	Relevance index
Suicidal thoughts		
Desire to die or not to wake up	1	1
Suicidal thoughts	1	1
Thoughts on how I would carry out this idea	1	1
Ideas accompanied by the intention to implement them.	1	1
Suicide attempts		
Elaboration of details on how to commit suicide and intentions to carry out the plan.	.833	.833
Prior attempts/planning or prior preparations to end your life	.833	.833
Self-injurious behavior		
Cutting or scratching your skin	1	1
Hitting yourself on purpose	1	1
Pulling out your hair	.667	.667
burning your skin (with a cigarette or other hot object)	.667	1
Inserting objects under the fingernails or skin	.833	.833
Skin scraping	.667	.667

In the dimension corresponding to the historical or family background factors (Table 4), a total of two items were identified as relevant and

representative, both with a relevance index of 0.67 and a representativeness index of 1.

Table 4: Index of representativeness and relevance of historical or family history.

Source: Own elaboration.

	Representativeness index	Relevance index
Family suicidal behavior		
Family member with a history of suicide attempt	1	.667
Family member with a history of suicide	1	.667

When the items contained in the dimension of emotional-motivational factors (Table 5) were examined, referring to the levels of hopelessness and reasons for living, a total of 29 representative

and 30 relevant items were identified. Of these, 18 obtained a representativeness index between 0.67 and 0.83, and another 18 obtained a relevance index within the same range. Twelve items obtained a relativity index equal to 1.

Table 5: Representativeness and relevance index of emotional-motivational factors.

Source: Own elaboration.

	Representativeness index	Relevance index
Level of hopelessness		
Looking forward to the future with hope and enthusiasm	1	1
To expect in the future to achieve what is of interest	.833	.833
Thinking of the future as dark	1	1
See all unpleasant	1	1
Do not expect to get what you want	1	1
Expect to be happier in the future	.667	.667
Have great confidence in the future	.833	.833
To be able to achieve real satisfaction in the future	.833	.833
Waiting for better times	1	1
Hopelessness and pessimism in achieving something	.667	.667
Reasons to live		
Believing you have control over your life	.833	.833
Desire to live	1	1
Fear of death	.667	.667
Not wanting to die	.667	.667
Wanting to see their children grow up	1	1
Have future plans that you want to make	1	1
Loving and enjoying the family	1	1
Courage for life	.667	1
Possibility of finding other solutions to the problem	.667	.667
Esteem and empathy for the family's grief	1	1
Expectations of things to do in the future	1	.833
To be happy and joyful with life	.667	.667

To hope that things will get better	.833	.833
No intention to hasten death	.667	.667
Do not want the family to think you are selfish or cowardly.	.667	.667

The dimension of adverse or potentially traumatic life factors (Table 6) explores indicators of physical, psychological, or sexual abuse, as

well as experiences of separation or rejection, bullying and cyberbullying, and exposure to other suicides. For this dimension, 22 items were considered representative or relevant

Table 6: Representativeness and relevance index of adverse or potentially traumatic life factors.

Source: Own elaboration.

	Representativeness index	Relevance index
Physical, psychological or sexual abuse		
Sexual assault (rape, attempted rape, made to perform any kind of sexual act through force or threat of harm)	1	.667
Other unwanted or uncomfortable sexual experience	1	1
Experiences of separation or rejection		
Bullying and Cyberbullying		
Someone has threatened you	1	.833
Has been excluded or ignored by others	1	1
Someone has spread rumors about him/her	.667	.667
Has hit, kicked or pushed anyone	.667	1
You have insulted and said offensive words to someone.	1	1
Has said offensive words about someone to others	.667	.667
Has threatened someone	1	1
You have spread rumors about someone	1	1
Someone has threatened you through Internet messages or SMS messages.	1	1
Someone hacked into your email account and removed your personal information.	1	.833
Someone has posted private videos or photos of you on the Internet.	.667	.667
You have been excluded or ignored from a social network or chat room.	.833	.833
Threatened someone through SMS or internet messaging	.667	1
You have hacked into someone's email account and stolen their personal information.	.667	1
Hacked into someone's account and impersonated him/her	.667	1
You have posted compromising videos or photos of someone on the Internet.	.667	.667
You have retouched photos or videos of someone that were posted on the Internet.	.667	.667
You have spread rumors about someone on the Internet	.833	.833

When observing the results obtained in the dimension of environmental and circumstantial factors (Table 7), which seeks to assess aspects related to the consumption of materials that promote and disseminate suicidal behavior through different media, it was found that a total of 4 items were considered representative, yielding scores of 0.67.

The social, interpersonal, and family factors (Table 8) obtained results of relevance and representativeness in the dimensions of problems with peers and social support with ranges of .67 and .83.

Table 7: Index of representativeness and relevance of environmental and circumstantial factors.

Source: Own elaboration.

	Representativeness index	Relevance index
Consumption of materials promoting and disseminating suicidal behavior (television, radio, internet).		
Have recently seen images or read about self-injury or suicide in any audiovisual media.	.667	.667
Having been tempted to harm oneself after viewing some type of content on the internet	.667	.667
Have been tempted to hurt yourself and sought help on the internet	.667	.667

Table 8: Index of representativeness and relevance of social, interpersonal and family factors.

Source: Own elaboration.

	Representativeness index	Relevance index
Problems with colleagues		
Others laugh at him/her at school or high school.	1	1
Beaten at school or high school	.667	.667
His classmates ignore him	1	.833
Social support		
His/her friends turn to him/her when they are in trouble	1	1
Is sociable	1	.667
Considers that he has real friends	1	.833

Finally, within the personality factors (Table 9), fourteen obtained accepted values of representativeness and relevance, including indicators related to hyperactivity, impulsivity, and emotional regulation. The factors linked to the motivational volitional theory (Table 10)

obtained 41 accepted indicators in the items of entrapment, defeat, and perceived efficacy for suicide.

In terms of clarity, the items of the nine dimensions obtained scores between 86% and 100% approval by the experts.

Table 9: Representativeness and relevance index of personality factors.

Source: Own elaboration.

	Representativeness index	Relevance index
Hyperactivity-Impulsivity		
They often tell you that you interrupt others and that you do not stop talking.	.667	.667
He is told that he is very impatient	.667	.667
Emotional regulation		
You find it difficult to understand your feelings	.833	.833

Table 10: Representativeness and relevance index of the factors of the volitional-motivational theory.

Source: Own elaboration.

	Representativeness index	Relevance index
Entrapment and Defeat		
Wants to escape from him/herself	.667	.667
You would like to run away from your thoughts and feelings	.667	.833
He feels he is in a pit from which he cannot climb out.	1	1
Feeling trapped	1	1
You want to escape from your life	1	1
Often have the feeling that you would like to run away	.667	.833
Feels unable to change things	1	1
He sees no way out of his current situation	1	1
You feel you have no place in the world	.667	1
He feels that life has treated him very badly	.667	.667
Feels powerless	.667	.667
Feels capable of dealing with any situation that gets in his way	.667	.667
You feel you have hit rock bottom	.667	1
Feeling sunken and lost	1	.667
He feels he has no strength left to fight	.667	.833
Acquired Ability (Perceived Efficacy) for suicide		
He is very afraid of dying	.667	1
He does not mind that death is the end of life as he knows it.	.667	.833
Can tolerate a great deal of physical discomfort	.667	.833

4. Discussion

As a first general result, it was possible to select, according to content validity criteria, a series of items that measure the most relevant facets related to self-injurious behavior, as outlined in the literature. The variables chosen to form part of this protocol were made up of scales or tests with proven evidence of validity and reliability (Table 1) (Al-Halabí et al., 2016; Ordoñez-Carrasco et al., 2021)

The dimensions with the highest number of relevant items were, in descending order, psychopathological factors, cognitive factors, volitional-motivational factors, adverse or potentially traumatic factors, and historical or family factors. Less than fifty percent of the items were emotional and motivational factors, environmental and circumstantial factors, and, finally, personality factors.

The first dimension analyzed refers to psychopathological factors, highlighting the items of depression, anxiety, substance use, posttraumatic symptomatology, obsession and compulsion, and the presence of somatic complaints. All of them obtained scores of significance for both the representativeness and the relevance of the test. Depressive, anxious, and addictive symptomatology is widely studied as factors linked to suicidal risk (Baca García & Aroca, 2014) (Park et al., 2020). In the case of posttraumatic symptomatology, although fewer studies establish this relationship (González and Crespo, 2022), there is evidence showing that the identification and treatment of posttraumatic indicators reduce the risk of suicide. To a lesser extent, studies show the presence of somatic complaints (Lopez-Vega et al., 2020) linked to suicidal risk. Similarly, traits of obsessive-compulsive behaviors significantly increase the risk of showing suicidal behaviors (Albert et al., 2019).

In the cognitive factors dimension, the indicators of attempts, suicidal ideation, and

self-injurious behaviors were accepted, while the suicide planning items were excluded. Thus, the participants found that the wording of the Suicidal Planning items did not fit the intended measure or that their content was not relevant to the dimension in which they were included. This result is not consistent with previous studies on risk factors that include suicidal planning as an aspect to be considered for the estimation of suicidal risk (Hernández-Bello et al., 2020). The relevance of the ideation and intentionality items may have displaced the value of planning, which can also be considered a form of ideation.

In another order, referring to the items linked to the dimension of volitional-motivational factors, it is accepted to focus on the feeling of entrapment and defeat felt by the person, leaving in smaller proportion the items linked to the acquired ability or perceived efficacy of suicide. Previous studies point to the direct relationship between aspects of entrapment and defeat with suicidal ideation in adolescents (O'Connor et al., 2018), unlike the case of acquired capacity for suicide, which has not shown evidence of internal validity (González-Betnazos, et al., 2022). Acquired capacity for suicide is mainly linked to a transition process between suicidal ideation and suicide attempt and may not be an element of initial risk assessment (Joiner, 2005; Van Orden et al., 2010).

The items referring to abuse and experiences of violence corresponding to the dimension of adverse and potentially traumatic factors were considered both representative and relevant. Some studies have highlighted how the experience of adverse or traumatic life events, especially in childhood, such as abuse, are risk factors or even determinants of suicide (García et al., 2006).

The items indicating the existence of previous suicides in the family obtained an adequate score of representativeness and relevance. In line with the existing literature, these items are considered relevant indicators for analyzing suicidal risk

(Hernández-Bello et al., 2020). Items related to identifying the mere kinship relationship with the deceased family member were discarded.

Regarding the dimension grouping of emotional and motivational factors, 43% were considered representative, and 44% were considered relevant for the items related to the contents of hopelessness and reasons for living. Many of the experts who participated in the present study did not rate most of these items positively as important or characteristic of what they were intended to measure. Consistently, similar results were found in other studies where the appropriateness of using these items is weighed for their weakness in estimating suicide risk (Rueda-Jaimes et al., 2016). This may be due to the preference for considering these dimensions for clinical intervention rather than for risk assessment. The same consideration is recommended as good practice for the assessment and treatment of suicidal behavior (Rueda-Jaimes et al., 2016).

The items linked to the dimension of environmental and circumstantial factors were considered representative and relevant, specifically those related to the promotion and dissemination of images, videos, or texts with violent or suicidal material. The judgments of experts who participated in the present study assessed exposure to information with suicidal content as a risk factor. The WHO has explained the role of media influence on suicidal and self-injurious attitudes, beliefs, and behaviors (Herrera et al., 2015) and has highlighted the importance of paying attention to this risk factor. The items related to the social, interpersonal, and family dimensions that were considered suitable for estimating this scale are those involving abuse or bullying content, which is an important risk factor and aligns with the adverse effects dimension.

The literature has highlighted that impulsivity is present in about half of the people with suicidal and self-injurious ideas (Sauceda et al., 2006). Consistent with these results, the items of the personality dimension positively valued by the experts in this study were those related to impulsivity and hyperactivity.

Some limitations of the present study should be mentioned. Firstly, it is related to the low participation of experts, which may be attributed to the extensive nature of the rating sheet, covering multiple dimensions. Some authors have considered this as a threatening aspect of completing a survey (Roco Videla et al., 2021). Secondly, the linguistic differences of the experts derived from their different nationalities and cultural contexts, whose idiomatic expressions can influence the judgment of the items as more or less accurate; thirdly, some of the participants have preferred paradigms or theoretical models, which could bias the assessment of the content of the items by aligning them with the postulates of their theoretical framework of reference. Finally, a fourth limitation was the small number of experts specialized both in the area of suicidal behavior in adolescents and psychometrics, particularly in content analysis. This means that the results of the present study should be interpreted with caution. Future studies should replicate these results with larger samples, utilizing a more parsimonious scale design and incorporating multiple informant sources.

Nevertheless, the set of these results represents a first attempt in the field of psychometric research to construct a scale from the content of previously validated tests and, even more, by obtaining evidence of content validity from the set of all items and variables associated with the main risk factors for suicidal behavior in adolescents and young adults.

It is recognized that this methodology of grouping items from different conceptualizations is unconventional. However, it offers the opportunity to establish more rigorous analyses and comparisons of the different factors associated with suicidal and self-injurious behavior from the perspective of different theoretical models. This type of item organization and structuring has been used in the field of forensic psychology to create protocols to estimate the risk of violence (Pueyo et al., 2008), and applied to the field of suicidal behavior invites further exploration of this methodological possibility.

The results of this study are beneficial for both psychometric research and clinical practice, as

they facilitate a more accurate categorization of the factors associated with the problem and their relationship with therapeutic intervention frameworks.

The associated factors outlined in this instrument can serve as a guide for designing psychoeducation or social intervention programs to be developed in community or school environments for the prevention of problems in the child and adolescent population.

This study can be considered the first content validity study of a suicide risk assessment

protocol for adolescents conducted in the Dominican Republic, which provides a background framework for other studies in the area of psychometrics that may be generalized to other countries with similar psychosocial and cultural characteristics.

Content validity studies should consider the sample size (Roco Videla et al., 2021). In the design of the instrument, a relevant factor to consider is the inclusion of psychological scales for data collection or the use of clinical interviews as alternative and complementary sources of information.

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