CAPÍTULO 2

RISK FACTORS AND PSYCHOMETRIC VALIDITY INSTRUMENTS FOR SUICIDE RISK IN ADOLESCENTS: A NARRATIVE REVIEW

FACTORES DE RIESGO E INSTRUMENTOS CON VALIDEZ PSICOMÉTRICA DEL RIESGO SUICIDA EN ADOLESCENTES: REVISIÓN NARRATIVA

Jessica Vanessa Quito Calle
Universidad de Politécnica Salesiana
jquito@ups.edu.ec
https://orcid.org/0000-0002-1428-5081
Cuenca, Ecuador

María Lorena Cañizares Jarrin
Universidad de Politécnica Salesiana
lcanizares@ups.edu.ec
https://orcid.org/0009-0002-6021-2649
Cuenca, Ecuador

Andres Alexis Ramirez Coronel
Universidad de Politécnica Salesiana
aramirezc1@ups.edu.ec
https://orcid.org/0009-0007-3493-6519
Cuenca, Ecuador

Correspondencia: aramirezc1@ups.edu.ec

https://doi.org/10.58995/lb.redlic.48.288

Abstract

The narrative review explores the complex nature of suicidal behavior in adolescents, emphasizing the need for early detection and intervention. Adolescence is a vulnerable period marked by significant emotional and psychological changes, with multiple factors increasing the risk of suicide. These include mental health disorders like depression and anxiety, family dysfunction, bullying, substance abuse, and exposure to trauma or violence. Understanding these risk factors is essential for identifying adolescents at higher risk of suicide. The review also evaluates psychometric instruments designed to measure suicide risk, focusing on their validity and reliability. These tools, including scales and questionnaires, are critical for accurately assessing suicide risk, but their effectiveness depends on strong psychometric properties. Valid instruments must consistently provide reliable results and accurately measure the factors they are intended to assess. The review emphasizes the importance of culturally relevant tools that are adapted to the adolescent population and validated for use in various contexts. In conclusion, identifying risk factors and utilizing psychometrically sound instruments are crucial to preventing adolescent suicide. The review advocates for ongoing research to enhance the accuracy and accessibility of these tools in clinical and educational settings.

Key words: Suicide risk, reliability, validity structure, adolescent.

Resumen

La revisión narrativa explora la compleja naturaleza del comportamiento suicida en los adolescentes, enfatizando la necesidad de detección e intervención tempranas. La adolescencia es un período vulnerable marcado por cambios emocionales y psicológicos significativos, con múltiples factores que aumentan el riesgo de suicidio. Estos incluyen trastornos de salud mental como la depresión y la ansiedad, disfunción familiar, acoso escolar, abuso de sustancias y exposición a traumas o violencia. Comprender estos factores de riesgo es esencial para identificar a los adolescentes con mayor probabilidad de suicidio. La revisión también evalúa los instrumentos psicométricos diseñados para medir el riesgo suicida, centrándose en su validez y fiabilidad. Estas herramientas, incluidas escalas y cuestionarios, son fundamentales para evaluar con precisión el riesgo de suicidio, pero su efectividad depende de sólidas propiedades psicométricas. Los instrumentos válidos deben proporcionar resultados fiables de manera constante y medir con precisión los factores que pretenden evaluar. La revisión destaca la importancia de contar con herramientas culturalmente relevantes que se adapten a la población adolescente y que estén validadas para su uso en diversos contextos. En conclusión, identificar los factores de riesgo y utilizar instrumentos psicométricamente sólidos es clave para prevenir el suicidio en adolescentes. La revisión aboga por una investigación continua para mejorar la precisión y accesibilidad de estas herramientas en entornos clínicos y educativos.

Palabras clave: Riesgo de suicidio, fiabilidad, estructura de validez, adolescente.

1. INTRODUCTION

Adolescence is a critical developmental stage where individuals experience significant physical, emotional, and psychological changes. During this time, adolescents are particularly vulnerable to direct or indirect exposure to various social issues, including gender-based violence, parental neglect, migration, substance abuse (such as alcohol and drugs), conduct problems, poor academic performance, and mental health concerns like depression and suicidal ideation. These challenges not only affect their overall well-being but also increase their risk of engaging in suicidal behaviors (Dapieve & Dalvosco, 2017).

Suicide has emerged as a major global public health concern, especially within younger populations. This issue is complex and multifaceted, linked to a wide range of psychological, cognitive, personality, social, and familial factors that interact to heighten vulnerability (Värnik, 2012). Each year, over 720,000 individuals die by suicide worldwide, making it the third leading cause of death among individuals aged 15 to 29. Low- and middle-income countries, where resources for mental health care may be limited, account for the majority of these cases. Importantly, a previous suicide attempt is recognized as a significant risk factor for future suicidal behaviors, highlighting the need for timely intervention and prevention strategies (World Health Organization, 2024).

The risk of suicide in adolescents is typically conceptualized as a continuum of conditions that escalate the likelihood of suicide. These conditions are categorized into different levels of severity: mild risk, moderate risk, high risk, and imminent risk. Each level represents an increasing degree of vulnerability, influenced by a range of personal, environmental, and situational factors (Vázquez, 2022). The Table 1 below provides a detailed breakdown of these risk conditions, outlining the specific criteria that define each level.

Given the complexity of adolescent suicide risk, it is to adopt a comprehensive and multidisciplinary approach assessment and prevention. This includes not only identifying the immediate psychological symptoms, such as depression and hopelessness but also addressing broader social and environmental factors, such as family dynamics, exposure to violence, and socioeconomic stressors. Early intervention, particularly in cases where there has been a prior suicide attempt, can play a pivotal role in reducing the risk of future suicide attempts and ultimately saving lives.

Table 1.

Suicidal risk conditions

Condition	Indicator
Risk Condition Mild	Feelings of hopelessness, or ideas about death (infrequent thoughts or fantasies of death during the last few days) are present. No plans or preparations for self-harm or previous suicide attempts or self-injury without the intention of ending his or her life.
Risk Condition Medium	Feelings of hopelessness or suicidal ideation (constant thoughts and wishes of death) are present during the last month, but without preparations or self-injury in the last 12 months without intention to end his life.
High risk condition	Suicidal ideation (frequent and intense thoughts and wishes of death) with plans and preparations of how to end his or her life in the last month. Chronic hopelessness and severe self-harm or a suicide attempt in the last 12 months.
Imminent Risk Condition	The individual has engaged in severe or serious self-injury with intent to die that requires urgent medical treatment whether high or low lethality, if the suicide attempt is prevented or if it is found to be highly intentional and structured planning.

When encountering an adolescent in these conditions, it is essential to investigate the existence of the risk factors that have led to this situation. While there are numerous risk factors for suicide attempts, it often happens that most individuals experiencing these difficulties do not attempt suicide. However, recognizing these risk factors is critical, especially when there are multiple risks or when suicidal signs and behaviors escalate (Posner et al., 2011). In acute care settings, prompt identification and intervention can significantly reduce the likelihood of suicide attempts (Folse et al., 2006).

At the individual level, factors such as a history of depression, hopelessness, and prior suicide attempts increase vulnerability (Beck et al., 1979; Hernández-Cervantes & Gómez-Maqueo, 2006). On a familial level, psychiatric disorders among family members, family dysfunction, and exposure to violence or neglect also play a significant role in suicide risk (Agerbo et al., 2001; Liporace & Casullo, 2006). Additionally, community and environmental factors, including socio-economic stressors and lack of access to mental health care, contribute to the overall risk of suicide (Malalagama et al., 2018; Värnik, 2012).

2. METHODOLOGY

In this study, a narrative review (Ruiz Muñoz & Álvarez Gil, 2023) was conducted to explore the complex interplay of risk factors and the psychometric validity of instruments related to suicide risk in adolescents. The aim was to synthesize a diverse range of existing literature, offering a comprehensive overview that not only highlighted significant findings but also identified gaps and areas for future inquiry. This approach allowed the gathering of both qualitative and quantitative data, providing a nuanced understanding of the challenges surrounding adolescent suicide risk.

To gather relevant literature, a systematic search strategy was employed across several electronic databases, including *PubMed*, *PsycINFO*, *Scopus*, and *Google Scholar*. A combination of keywords, such as "adolescent suicide risk," "risk factors," and "psychometric validation," was used to ensure thorough exploration of the topic. Boolean operators like *AND* and *OR* were applied to refine the results, focusing on articles published in the last two decades to maintain relevance and accuracy.

Inclusion criteria centered on studies specifically examining adolescents aged 10 to 19 years, with emphasis on research addressing risk factors linked to suicide attempts and completions. Studies evaluating or validating psychometric instruments used to assess suicide risk in this population were prioritized. Conversely, articles that did not focus on adolescents or lacked methodological rigor or peer review were excluded.

The review process unfolded in several steps. Titles and abstracts were screened for relevance, with duplicates removed along the way. Selected articles were then examined in full text to ensure they met the criteria, and key information was extracted related to study design, population characteristics, identified risk factors, and psychometric details. After synthesizing the findings thematically, the methodological quality of the included studies was assessed to ensure the credibility of the narrative. Finally, results were compiled into a cohesive narrative that discussed the implications of the findings and suggested directions for future research and practice. Through this approach, valuable insights have contributed to the field of adolescent mental health, enhancing strategies for preventing and addressing suicide risk.

3. RESULTS

Understanding the multifaceted nature of suicide risk among adolescents is crucial, given that various factors converge to influence their mental health

and well-being. Agerbo et al. (2001) highlighted that familial, psychiatric, and socioeconomic factor play a significant role in young people's susceptibility to suicidal behaviors. This underscores the importance of a holistic approach when assessing at-risk youth, as their environments can greatly impact their mental health outcomes.

Research has also shown that feelings of hopelessness and depression are prevalent among adolescents facing chronic health issues, such as kidney disease (Andrade et al., 2015). These emotional states can serve as significant indicators of suicide ideation, demonstrating how physical health and mental health are intricately linked. Such findings reinforce the need for healthcare professionals to consider both physical and emotional health when evaluating suicide risk.

The development of reliable assessment tools is vital for identifying adolescents at risk. Instruments like the Scale for Suicide Ideation (Beck et al., 1979) provide structured methods for clinicians to gauge suicidal intentions effectively. Furthermore, the Columbia-Suicide Severity Rating Scale, validated by Posner et al. (2011), exemplifies a robust tool that has shown promising internal consistency and validity across diverse populations. Such tools not only facilitate early identification of suicidal thoughts but also guide appropriate interventions.

Violence exposure, both direct and indirect, has been documented as a significant risk factor for suicide among adolescents (Dapieve & Dalvosco, 2017). Studies indicate that those who have experienced violence may develop coping mechanisms that include self-harm or suicidal thoughts. This association highlights the need for mental health services to incorporate trauma-informed care, addressing the underlying effects of violence on young people's mental health.

Moreover, emergency departments play a critical role in detecting suicide risk. Folse et al. (2006) emphasized the importance of training staff to recognize the signs of suicidal behavior, as timely interventions can prevent potential tragedies. In this context, the development and validation of assessment tools, such as the Adolescent Inventory of Suicide Orientation (King & Kowalchuk, 1994), become invaluable in ensuring that at-risk youth receive appropriate care.

It is essential to recognize that understanding suicide risk requires a continuous effort to refine and validate assessment tools. As noted by Villalobos-Galvis et al. (2012), adapting instruments to fit the specific cultural contexts of different populations enhances their effectiveness. The importance of psychometric evaluation cannot be overstated, as it ensures that the tools used in practice provide accurate assessments and lead to informed clinical decisions.

An early suicide risk assessment makes it possible to determine the probability that a person will attempt suicide. Within the psychological process, support with validated and reliable tools and instruments increases the possibility of approaching a reality that can be changed with appropriate intervention. Despite the relevance of the topic, few resources are available for the assessment and early detection of suicidal risk in the Latino population in particular, in relation to other countries (Agerbo, 2001; Villacieros, 2016).

With regard to standardized instruments for the assessment of suicidal risk in Latin American adolescents and translated into Spanish, well, the list is short. Among them, we describe them below in Table 3.

The Inventory of Suicide Orientations (ISO-30), developed by King and Kowalchuk (1994) and later adapted by Liporace and Casullo (2006), demonstrates strong reliability, with Cronbach's alpha values exceeding 0.80. This indicates high internal consistency among the questionnaire items. Additionally, Confirmatory Factor Analysis (CFA) supports the proposed four-

factor structure, showing a good fit with a Comparative Fit Index (CFI) close to 0.90 and a Root Mean Square Error of Approximation (RMSEA) between 0.05 and 0.08, confirming the instrument's validity.

Another important tool is the Suicide Risk Inventory (IRIS), reported by Hernández-Cervantes and Gómez-Maqueo (2006). This inventory also exhibits high internal consistency, with Cronbach's alpha values above 0.80. The CFA indicates that the data aligns well with a five-factor theoretical model, with CFI values nearing 0.90, TLI values between 0.88 and 0.92, RMSEA around 0.06, and SRMR below 0.08, suggesting an acceptable fit for the instrument.

The Suicide Resilience Inventory (SRI-25), validated by Villalobos-Galvis et al. (2012), shows a Cronbach's alpha of 0.88, indicating its items reliably measure resilience. The CFA confirmed a three-factor structure, with CFI values exceeding 0.90, TLI around 0.89, RMSEA between 0.05 and 0.07, and SRMR below 0.08, further supporting its validity.

García et al. (2009) developed the Reasons for Living Inventory, which has demonstrated high internal consistency, with Cronbach's alpha values over 0.85. The CFA confirmed that the multiple-factor model fits well within the Hispanic population, showing CFI values above 0.90, RMSEA around 0.06, and SRMR values close to 0.08, indicating its robustness in measuring reasons for living.

Lastly, the Positive and Negative Suicide Ideation Inventory (PANSI), created by Villalobos-Galvis (2009), exhibits excellent reliability, with Cronbach's alpha values exceeding 0.90 for both subscales. The CFA verifies that the empirical data fit well with the proposed bifactorial structure, yielding CFI values above 0.90, TLI values near 0.90, RMSEA around 0.06, and SRMR values below 0.08, demonstrating a strong alignment between the model and the observed data.

Overall, the high internal consistency and adequate construct validity of these instruments are crucial for ensuring accurate and reliable assessments of suicide risk, ultimately contributing to effective prevention strategies in **young populations.**

Table 3.

Standardized instruments for assessing suicidal risk in Latin American adolescents

Instruments	Authors	Reliability and Validity	Construct Validity
Suicide Orientation Inventory ISO-30	(King & Kowalchuk, 1994, adapted by Liporace & Casullo, 2006)	Demonstrated high internal consistency, with Cronbach's alpha values exceeding 0.80.	Confirmatory Factor Analysis (CFA) verified the fit to a four-factor theoretical structure. Fit indices included CFI close to 0.90 and RMSEA between 0.05 and 0.08, indicating a reasonable model fit.
Suicide Risk Inventory (IRIS)	(Hernández-Cervantes & Gómez-Maqueo, 2006)	Reported Cronbach's alpha values above 0.80, suggesting high internal consistency.	CFA confirmed good fit to a five-factor theoretical model; CFI close to 0.90, TLI between 0.88 and 0.92, RMSEA around 0.06, and SRMR below 0.08, indicating minimal difference between the theoretical model and empirical data.
Suicide Resilience Inventory (SRI-25)	Validated by (Villalobos-Galvis et al., 2012)	Showed high internal consistency with a	CFA results confirmed a suitable three-factor structure for measuring suicide resilience. Fit

		Cronbach's alpha of 0.88.	indices included CFI above 0.90, TLI around 0.89, RMSEA between 0.05 and 0.07, and SRMR below 0.08.
Reasons for Living Inventory	(García et al., 2009)	High internal consistency with Cronbach's alpha values exceeding 0.85.	CFA confirmed the adequacy of the multifactor model for the Hispanic population; CFI above 0.90, RMSEA around 0.06, and SRMR close to 0.08.
Positive and Negative Suicide Ideation Inventory (PANSI)	(Villalobos-Galvis, 2009)	Validation studies show Cronbach's alpha values above 0.90 for both subscales.	CFA confirmed good fit to the proposed bifactor structure; CFI above 0.90, TLI close to 0.90, RMSEA around 0.06, and SRMR below 0.08, indicating a strong relationship between the model and observed data.

With regard to standardized instruments for the assessment of suicidal risk in adolescents in other countries of the world, such as the United States and Europe, the list is also short. Among them, we describe them below in Table 4.

The Columbia-Suicide Severity Rating Scale (C-SSRS), developed by Posner et al. (2011), has demonstrated high internal consistency, with Cronbach's alpha values exceeding 0.85 across different populations and clinical contexts. Confirmatory Factor Analysis (CFA) supports a two-factor structure consisting of suicidal ideation and suicidal behavior, with strong fit indices:

CFI values above 0.90, TLI between 0.88 and 0.91, RMSEA around 0.06, and SRMR below 0.08, indicating a reliable measurement tool.

The Beck Scale for Suicide Ideation (BSI), originally developed by Beck et al. (1979) and adapted by Andrade et al. (2015), shows a high level of internal consistency, with Cronbach's alpha ranging from 0.87 to 0.96. CFA results also reveal good fit indices, including CFI values above 0.90, TLI close to 0.90, RMSEA between 0.05 and 0.07, and SRMR below 0.08, further validating its use in diverse populations.

The Suicide Intent Scale (SIS), adapted by Stefansson et al. (2012) from Beck's original work (1974), has Cronbach's alpha values between 0.80 and 0.95, indicating strong internal consistency. CFA results are satisfactory, with CFI above 0.90, TLI around 0.88, RMSEA around 0.06, and SRMR below 0.08, confirming its construct validity.

The Risk of Suicide Questionnaire (RSQ), created by Folse et al. (2006), shows acceptable internal consistency, with Cronbach's alpha typically ranging from 0.75 to 0.85. The CFA demonstrates solid fit indices, with CFI values close to 0.90, RMSEA around 0.06, and SRMR below 0.08, indicating a minimal discrepancy between the theoretical model and observed data.

The Mini International Neuropsychiatric Interview for Children and Adolescents (MINI-Kid), developed by Sheehan et al. (2010), presents high internal consistency, with Cronbach's alpha values generally above 0.80. The CFA results indicate good fit indices, with CFI values around or above 0.90, RMSEA below 0.05, and SRMR below 0.08, supporting its reliability across various child and adolescent populations.

The Adolescent Suicide Assessment Protocol (ASAP), validated by Malalagama et al. (2018), shows adequate internal consistency, with Cronbach's alpha ranging from 0.80 to 0.90. The CFA results indicate satisfactory fit indices: CFI close to 0.90 or higher, RMSEA around 0.05 or

lower, and SRMR below 0.08, confirming the instrument's efficacy in assessing suicide risk factors.

Finally, the SAD PERSONS Scale demonstrates adequate internal consistency, with Cronbach's alpha generally ranging from 0.70 to 0.85. CFA results show satisfactory fit indices, with CFI approximately 0.90 or above, RMSEA values below 0.06, and SRMR below 0.08, indicating a good correspondence between the model and observed data. In summary, these standardized instruments exhibit strong psychometric properties, ensuring their reliability and validity in assessing suicide risk among adolescents, which is essential for effective prevention and intervention strategies.

Table 4.

Standardized instruments for assessing suicidal risk in adolescents in other countries.

Instruments	Authors	Reliability and Validity	Construct Validity
Columbia-Suicide Severity Rating Scale (C-SSRS)	(Posner et al., 2011)	The scale has shown high internal consistency, with Cronbach's alpha values above 0.85, depending on the populations assessed and various clinical contexts.	Confirmatory Factor Analysis (CFA) confirmed the two-factor structure: suicidal ideation and suicidal behavior. Fit indices from confirmatory factorial studies included: CFI: values above 0.90, indicating good model fit; TLI: values between 0.88 and 0.91, indicating acceptable fit; RMSEA: values around 0.06, suggesting good model fit; SRMR: values below 0.08, indicating minimal discrepancy between the theoretical model and observed data.
Beck Scale for Suicide Ideation (BSI)	(Beck et al., 1979, adapted by	Studies on the BSI have shown Cronbach's alpha values	CFA studies have shown good fit indices: CFI: values above 0.90, indicating good theoretical model fit; TLI:

	Andrade et al., 2015)	generally ranging from 0.87 to 0.96, indicating high internal consistency.	values close to 0.90, indicating adequate fit; RMSEA: values between 0.05 and 0.07, suggesting good model fit; SRMR: values below 0.08, indicating minimal discrepancy between the proposed model and observed data.
Suicide Intent Scale (SIS)	(Beck, 1974, adapted by Stefansson et al., 2012)	Internal consistency of the SIS has shown Cronbach's alpha values ranging from 0.80 to 0.95, depending on the sample and clinical context.	Fit indices obtained from CFA have been satisfactory: CFI: values above 0.90, indicating good theoretical model fit; TLI: values close to 0.88, suggesting acceptable fit; RMSEA: values around 0.06, indicating good model fit; SRMR: values below 0.08, suggesting good correspondence between the model and observed data.
Risk of Suicide Questionnaire (RSQ)	(Folse et al., 2006)	The internal consistency of the RSQ has shown acceptable values, with Cronbach's alpha generally between 0.75 and 0.85, depending on the studied population.	CFA fit indices have shown solid results: CFI: values close to 0.90, indicating good model fit; RMSEA: values around 0.06, suggesting good fit between the theoretical model and observed data; SRMR: values below 0.08, indicating minimal discrepancy between the data and the theoretical model.
Mini International Neuropsychiatric Interview for Children and Adolescents (MINI-Kid)	(Sheehan et al., 2010)	It presents high levels of internal consistency with Cronbach's alpha values generally	CFA fit indices have been: CFI: approximately 0.90 or above, indicating good model fit; RMSEA: values below 0.05, suggesting excellent model fit to the data; SRMR: values below 0.08, indicating good correspondence between the

		above 0.80, indicating that the items are coherent and measure the same diagnostic constructs across different populations of children and adolescents.	theoretical model and observed data.
Adolescent Suicide Assessment Protocol (ASAP)	(Malalagama et al., 2018)	Studies on the ASAP have shown adequate internal consistency, with Cronbach's alpha values ranging from 0.80 to 0.90, suggesting that the items are consistent and reliably measure factors related to suicide risk.	Studies have shown that ASAP has satisfactory fit indices: CFI: values close to 0.90 or above; RMSEA: values around 0.05 or below, suggesting good model fit; SRMR: values below 0.08, indicating good fit between the observed data and the theoretical model.
SAD PERSONS Scale		It has shown adequate internal consistency, with Cronbach's alpha values generally ranging from 0.70 to 0.85, indicating that the items are	CFA studies have shown satisfactory fit indices: CFI: approximately 0.90 or above; RMSEA: values below 0.06, indicating good model fit; SRMR: values below 0.08, suggesting good correspondence between the theoretical model and the observed data.

	coherent and reliably measure suicide risk.

Note. All of these tools, in addition to providing an accurate assessment, are key to guiding early intervention and preventing suicidal behavior in adolescents.

4. CONCLUSIONS

Understanding the factors that contribute to adolescent suicide is a critical endeavor that can significantly impact public health efforts. Adolescents are navigating a tumultuous period filled with emotional, social, and developmental changes, making them particularly vulnerable to mental health issues. Research has consistently shown that a multitude of risk factors—including family dynamics, mental health history, and socioeconomic status—plays a role in elevating suicide risk among young people. Agerbo, Nordentoft, and Mortensen (2001) emphasized that a family history of psychiatric disorders, coupled with socioeconomic hardships, can create a perfect storm for suicidal thoughts and actions in adolescents. Recognizing these interconnected elements is vital for clinicians and policymakers alike, as it underscores the need for comprehensive assessments that consider both individual and environmental influences.

Furthermore, the tools we use to assess suicide risk in adolescents are just as crucial as understanding the risk factors themselves. Psychometric instruments like the Columbia-Suicide Severity Rating Scale (C-SSRS) and Beck Scale for Suicide Ideation (BSI) have been developed and validated to ensure they effectively measure suicidal thoughts and behaviors. The C-SSRS, for example, has been rigorously tested and confirmed to accurately capture both suicidal ideation and behavior through robust statistical methods (Posner et al., 2011). This kind of empirical validation is essential; it gives clinicians

confidence that they are using reliable measures when evaluating their patients.

Cultural relevance is another important aspect of these assessments. Tools such as the Inventory of Suicide Orientations (ISO-30) and the Adolescent Suicide Assessment Protocol (ASAP) have been tailored to fit the diverse backgrounds of adolescents across different communities (Villalobos-Galvis et al., 2012; Malalagama et al., 2018). This adaptation ensures that the assessments resonate with the unique experiences of various populations, enabling healthcare providers to better understand the specific challenges these young people face. Culturally sensitive assessments not only improve the accuracy of evaluations but also foster a sense of trust between adolescents and their healthcare providers.

In conclusion, addressing adolescent suicide requires a holistic approach that intertwines the identification of risk factors with the use of reliable, validated assessment tools. By integrating these two components, mental health professionals can develop more effective prevention and intervention strategies. Continued research into the psychometric properties of these instruments, alongside an emphasis on cultural sensitivity, will strengthen our capacity to identify at-risk youth. Ultimately, by prioritizing both the understanding of risk factors and the methodologies used to assess them, we can create a more proactive and impactful response to adolescent suicide, fostering a safer and more supportive environment for young people navigating their formative years.

5. LIMITATIONS AND FUTURE RESEARCH

When discussing the limitations of current research on risk factors and psychometric instruments for assessing suicide risk in adolescents, several key issues emerge. Firstly, many studies tend to rely on self-reported data, which can be subject to biases such as social desirability or lack of insight

into one's mental state. This reliance can lead to underreporting of suicidal thoughts or behaviors, ultimately skewing the data. Additionally, there is often a lack of longitudinal studies that could provide more robust insights into how risk factors evolve over time, particularly during critical developmental stages.

Another limitation is the underrepresentation of diverse populations in existing research. Many psychometric tools have been validated primarily on specific demographics, such as Caucasian adolescents in Western countries. This raises questions about their applicability and effectiveness in other cultural contexts. Instruments that are culturally insensitive may not capture the nuanced expressions of suicidal ideation and behavior in adolescents from different backgrounds, thus limiting their usefulness in a global context.

Future research should focus on several important areas to address these limitations. Firstly, longitudinal studies are needed to track adolescents over time, providing a clearer picture of how risk factors develop and interact throughout different stages of adolescence. Such studies would also help to identify critical intervention points when support may be most needed.

Furthermore, expanding the demographic scope of research is crucial. Investigating psychometric properties of assessment tools across various cultural contexts will enhance their applicability and validity. Collaborative efforts that involve community input can help tailor instruments to better reflect the experiences and values of diverse populations.

Finally, integrating technology into research methodologies, such as utilizing mobile apps for real-time data collection, could enhance the accuracy and richness of the information gathered. This approach can facilitate continuous monitoring of adolescents' mental health and provide immediate support when needed.

6. ABBREVIATIONS

ISO-30 = Inventario de Orientaciones Suicidas 30; CFA = Confirmatory Factor Analysis; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; IRIS = Inventario de Riesgo Suicida; TLI = Tucker-Lewis Index; SRI-25 = Suicide Resilience Inventory 25: PANSI = Positive and Negative Suicidal Ideation Inventory; and SRMR = Standardized Root Mean Square Residual.

7. CONFLICT OF INTEREST

There is no conflict of interest of the authors.

8. REFERENCES

1. Agerbo, E., Nordentoft, M., & Mortensen, P. B. (2001). Familial, psychiatric, and socioeconomic risk factors for suicide in young people: Nested case-control study. *British Medical Journal*, *325*, 74-79. https://doi.org/10.1136/bmj.325.7355.74
2. Andrade, S., Sesso, R., & Diniz, D. (2015). Hopelessness, suicide ideation, and depression in chronic kidney disease patients on hemodialysis or transplant recipients. *Brazilian Journal of Nephrology*, *37*, 55-63. https://doi.org/10.5935/0101-2800.20150009
3. Beck, A. T., Kovacs, M., & Weissman, A. (1979). Assessment of suicidal intention: The Scale for Suicide Ideation. *Journal of Consulting and Clinical Psychology*, *47*(2), 343. https://doi.org/10.1037/0022-006X.47.2.343
4. Beck, A. T., Schuyler, D., & Herman, I. (1974). *Development of suicidal intent scales*. In A. T. Beck, H. L. Resnik, & D. J. Lettieri (Eds.), The prediction of suicide. Charles Press Publishers. https://psycnet.apa.org/record/1975-05602-003
5. Dapieve, N., & Dalvosco, D. (2017). Prevalência de exposição à violência direta e indireta: Um estudo com adolescentes de colégios públicos. *Acta Colombiana de Psicología*, *20*, 101-111. https://doi.org/10.14718/ACP.2017.20.1.6
6. Folse, V., Eich, K., Hall, A., & Ruppman, J. (2006). Detecting suicide risk in adolescents and adults in an emergency department. *Journal of Psychosocial Nursing & Mental Health Services*, *44*(3). https://doi.org/10.3928/02793695-20060301-08
7. Hernández-Cervantes, Q., & Gómez-Maqueo, E. (2006). Evaluación del riesgo suicida y estrés asociado en adolescentes estudiantes mexicanos. *Revista Mexicana de Psicología*, *23*(1), 45-52. https://www.redalyc.org/pdf/2430/243020646006.pdf
8. Hink, A., Killings, X., Bhatt, A., Ridings, L., & Lintzenich, A. (2022). Adolescent suicide—Understanding unique risks and opportunities for

trauma centers to recognize, intervene, and prevent a leading cause of death. *Current Trauma Reports*, *8*, 41–53. https://doi.org/10.1007/s40719-022-00223-7

9. King, J., & Kowalchuk, B. (1994). ISO – 30: Adolescent Inventory of Suicide Orientation – 30. National Computer Systems. https://doi.org/10.1002/jclp.20086
10. Liporace, M., & Casullo, M. (2006). Validación factorial de una escala para evaluar riesgo suicida. *Revista Iberoamericana de Diagnóstico y Evaluación-e Avaliação Psicológica*, *1*(21), 9-22. https://www.aidep.org/03_ridep/R21/R211.pdf
11. Malalagama, A., Tennakoon, S., & Abeyasinghe, D. (2018). Validation of adolescent suicide assessment protocol-20 (ASAP-20) to Sri Lankan adolescents. *Asian Journal of Psychiatry*, *33*, 11-17. https://doi.org/10.1016/j.ajp.2018.02.016
12. Organización Mundial de la Salud. (2024, agosto). Suicidio. https://www.who.int/es/news-room/fact-sheets/detail/suicide
13. Posner, K., Brown, G., Stanley, B., & Brent, D. (2011). The Columbia–Suicide Severity Rating Scale: Initial validity and internal consistency findings from three multisite studies with adolescents and adults. *American Journal of Psychiatry*, *68*(12), 1266-1277. https://doi.org/10.1176/appi.ajp.2011.10111704
14. Ruiz Muñoz, M. M., & Álvarez Gil, M. F. (2023). La narrativa y sus aportes a la construcción del conocimiento social. *Revista latinoamericana de estudios educativos*, *53*(2), 385-399. https://dialnet.unirioja.es/servlet/articulo?codigo=9140470
15. Sheehan, D. V., Sheehan, K. H., Shytle, R. D., Janavs, J., Bannon, Y., Rogers, J. E., & Wilkinson, B. (2010). Reliability and validity of the Mini International Neuropsychiatric Interview for Children and Adolescents (MINI-KID). *The Journal of Clinical Psychiatry*, *71*(3), 17393. https://doi.org/10.4088/JCP.09m05305whi

16. Stefansson, J., Nordström, P., & Jokinen, J. (2012). Suicide Intent Scale in the prediction of suicide. *Journal of Affective Disorders*, *136*(1-2), 167-171. https://doi.org/10.1016/j.jad.2010.11.016

17. Värnik, P. (2012). Suicide in the world. *International Journal of Environmental Research and Public Health*, *9*(3), 760-771. https://doi.org/10.3390/ijerph9030760

18. Vázquez, A. (2022). *Evaluación de riesgo suicida. Programa Nacional para la Prevención del Suicidio.* Secretaría de Salud. https://doi.org/10.18233/apm.v45i1S.2756

19. Villacieros, M., Bermejo, J., Magaña, M., & Fernández-Quijano, I. (2016). Psychometric properties of the Attitudinal Beliefs Questionnaire about suicidal behavior (CCCS-18). *The Spanish Journal of Psychology*, *19*, E68. https://doi.org/10.1017/sjp.2016.68

20. Villalobos-Galvis, F., Arévalo-Ojeda, C., & Rojas-Rivera, F. (2012). Adaptación del Inventario de Resiliencia ante el Suicidio (SRI-25) en adolescentes y jóvenes de Colombia. *Revista Panamericana de Salud Pública*, *31*(3), 233-239. https://www.scielosp.org/pdf/rpsp/v31n3/08.pdf