



## Introduction

One million people in the world [1] and According to a survey conducted on 46 Muslim countries in 2019, about 4334 people in Iran died due to suicide [2]. Suicide as an unprecedented and serious social health crisis is the fifth cause of death in Iran and among the ten main causes of death of all ages around the world [3–5]. Suicide has profound effects not only on the dying person, but also on the mourned people and the community [1] and with each death of the suicide, about 60 are directly affected [6]. As a result, suicide prevention, especially in its early stages, is considered a vital strategy [4, 5].

The phenomenon of suicide includes four stages of suicidal thoughts, suicide planning, suicide attempt and suicide completion [3]. Suicide ideations are often known as suicide ideas or suicidal thoughts and is used as a broad term to describe a range of intellectual conflict, wishes and thoughts on death and suicide [7]. Suicidal thoughts are common in Iran, and about 12.7% of Iranians experience suicidal thoughts throughout their lives [8, 9]. Suicidal thoughts are emergency issues in psychiatry and one of the most important predictors of suicide attempt, and in the first year that one experiences suicidal thoughts, the risk of suicide attempt increases to 170 times. As a result, prevention, early identification and treatment of suicidal ideation to improve mental health and reduce the risk of suicide are required. Screening of suicidal thoughts or suicidal ideation, both in public and specialized medical care and in populations such as society, can be a key strategy for preventing suicide [10–12].

In this regard, the presence of a standard, precise and brief tool for screening suicidal thoughts can be very helpful. One of the existing tools translated in Iran is the Beck scale for suicidal ideation (BSSI) [13]. This tool was presented in 1979 by Beck et al., and has 19 items and examines the existence and severity of suicidal thoughts over the past week [14]. The BSSI tool, despite providing extensive information, is often not suitable for online or epidemiological studies because it requires prescription by a clinical trained person and is not brief for epidemiological studies [15].

Another existing tool is the Suicidal Ideation Attributes Scale (SIDAS). This scale was presented and evaluated in 2014 by Van Spijker et al. [15]. This scale has five items and measured with zero to 10-point scale and assess the presence and severity of suicidal thoughts over the past month in terms of frequency, closeness to attempt, controllability, level of distress associated with the suicidal thoughts and its impact on the individual [16].



df= 10). In EFA, one factor with eigenvalues more than 1 was extracted and explained 70.95% variance of SIDAS.

#### CFA

The 1 factor extracted in EFA was evaluated in CFA and was approved based on the results of goodness-of-fit indices. In the final model, one modification was created between measurement error of e3 to e4 (Fig. 1) and all of factor loadings were more than 0.5 (Table



SIDAS	Suicidal Ideation Attributes Scale
BSSI	Beck scale for suicidal ideation
BTS	Bartlett's Test of Sphericity
EFA	Exploratory factor analysis
KMO	Kaiser-Meyer-Olkin, CFA: Confirmatory factor analysis
AGFI	Adjusted Goodness of Fit Index
RFI	Relative Fit Index
NFI	Normed Fit Index
GFI	Goodness of fit index
IFI	Incremental fit index
RMSEA	Root mean square error of approximation
X <sup>2</sup>	Chi-square
DF	Degree of freedom
CFI	Comparative fit index
S-CVI/ Ave	Scale content validity index averaging
CVR	Content validity ratio
ICC	Intraclass correlation coefficient

4. Azizi H, Fakhari A, Farahbakhsh M, Esmaeili ED, Mirzapour M. Outcomes of community-based suicide prevention program in primary health care of Iran. *Int J Ment Health Syst.* 2021;15(1):67.
5. Anisi J, Majdian M, Mirzamani SM. The factors associated with suicide ideation in Iranian soldiers. *Iran J Psychiatry.* 2010;5(3):97–101.
6. Spillane A, Matvienko-Sikar K, Larkin C, Corcoran P, Arensman E. What are the

### Acknowledgements

The authors of the study express their sincere gratitude of Mashhad University of Medical Sciences. We would also like to thank all the people who assisted us in conducting this research project.

### Author contributions

Authors AJ, HT, MN, FN, MGh, and KB designed the study. AJ, HT, MN, FN, MGh, and KB participated in the conception of the study. AJ, HT and FN managed and conducted the statistical analyses and interpreted the data. AJ and FN wrote the first draft and AJ, FN, and HT revised it to make the final manuscript. All authors have approved the final manuscript.

### Funding

This study was received financial support from Mashhad University of Medical Sciences.

### Data availability

All data generated or analysed during this study are included in this published article.

### Declarations

#### Ethics approval and consent to participate

This study is based on a research project approved by Ethics Committee of Mashhad University of Medical Sciences with the code of ethics IR.MUMS.REC.1402.297. All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable. Written Informed Consent was obtained from all subjects.

#### Consent for publication

Not applicable.

#### Competing interests

The authors declare no competing interests.

Received: 20 October 2024 / Accepted: 26 February 2025



### References

1. Oyetunji TP, Arafat SY, Famori SO, Akinboyewa TB, Afolami M, Ajayi MF, Kar SK. Suicide in Nigeria: observations from the content analysis of newspapers. *Gen Psychiatry* 2021, 34(1).
2. Arafat SY, Marthoenis M, Khan MM, Rezaeian M. Association between suicide rate and human development index, income, and the political system in 46 muslim-majority countries: an ecological study. *Eur J Invest Health Psychol Educ.* 2022;12(7):754–64.
3. Sha'ee M, Mahboubi M, Shanbehzadeh M, Kazemi-Arpanahi H. Design, development, and evaluation of a surveillance system for suicidal behaviors in Iran. *BMC Med Inf Decis Mak.* 2022;22(1):180.

32. Posner K, Brown GK, Stanley B, Brent DA, Yershova KV, Oquendo MA, Currier GW, Melvin GA, Greenhill L, Shen S, et al. The Columbia-Suicide severity rating scale: initial validity and internal consistency findings from three multisite studies with adolescents and adults. *Am J Psychiatry*. 2011;168(12):1266–77.
33. Forkmann T, Glaesmer H, Paashaus L, Rath D, Schönfelder A, Stengler K, Juckel G, Assion HJ, Teismann T. Interpersonal theory of suicide: prospective examination. *BJPsych Open*. 2020;6(5):e113.
34. Badrick T, Bowling F. Clinical utility - Information about the usefulness of tests. *Clin Biochem* 2023, 121–2:110656.
35. Eskin M. 27The role of culture in a suicidal process. *Suicide across cultures: Understanding the variation and complexity of the suicidal process across ethnicities and cultures*. Oxford University Press: 2024. p. 0.
36. Sadek J, Diaz-Piedra B, Saleh L, MacDonald L. A narrative review: suicide and suicidal behaviour in older adults. *Front Psychiatry*. 2024;15:1395462.

### **Publisher's note**

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.