ORIGINAL ARTICLE

https://doi.org/10.61910/ricm.v8i1.389

Relationship between suicidal behavior, stigma and knowledge about suicide: a cross-sectional study

MELISSA ABADE GUIMARÃES[1], GABRIELA LUIZA NOGUEIRA VITRAL[1], CLÁUDIA NATIVIDADE[2], RENATA SALDANHA SILVA[1]

[1] FACULDADE DE CIÊNCIAS MÉDICAS DE MINAS GERAIS – BELO HORIZONTE, MG–BRAZIL
[2] FACULDADE ARNALDO JANSSEN E ASSESSORA DO CENTRO ESTADUAL DE APOIO ÀS VÍTIMAS–MPMG – BELO HORIZONTE, MG–BRAZIL

CORRESPONDING AUTHOR: RENATA SALDANHA SILVA – ALAMEDA EZEQUIEL DIAS, 275. CENTRO – ZIP CODE: 30130-110–BELO HORIZONTE, MG–BRAZIL
EMAIL: RENATA.SILVA@CIENCIASMEDICASMG.EDU.BR

ABSTRACT

Introduction: Suicide is a complex phenomenon that represents a public health problem. There are groups that are at risk for suicide, but stigmatization and lack of knowledge about the topic can interfere with the identification and treatment. **Objective:** To investigate the potential relationship between suicidal behavior, stigma and knowledge about suicide. **Method:** The 29 participants were selected in two cities in the interior of Minas Gerais in the second half of 2019. They were divided into three groups according to the presence of suicidal behavior. Four instruments were applied: semi-structured interview with sociodemographic questionnaire, Self-Reporting Questionnaire, Stigma of Suicide Scale–Short Form, Literacy of Suicide Scale–Short Form. The comparison of subgroups of interest was conducted using the Kruskall-Wallis test. The group studied in this research was compared to more representative samples of the general population. **Results:** Most participants had some diagnosis of mental disorder (82.8%). The average score obtained in the stigma and knowledge questionnaires was similar between the subgroups (p = 0.945 and p = 0.847, respectively). However, the group in this study exhibited higher levels of stigma and glorification of suicide compared to the normative sample. **Conclusion:** The study showed similar scores between the questionnaires on stigma, isolation, normalization and knowledge about suicide. The stigmatization of suicide is a harmful social phenomenon, therefore understanding it is important for the prevention and treatment of suicidal behavior within the scope of public health.

Keywords: Suicide; Public Health; Mental Health.

INTRODUCTION

Suicidal behavior is a complex phenomenon and represents a serious public health problem[1]. More than 97,000 people in the Americas died by suicide in 2019, representing an age-standardized rate of 9.0 per 100,000 population (14.2 per 100,000 men and 4.1 per 100,000 women). According to the Pan American Health Organization[2], Brazil has an average that is comparable with other countries in America (5.21 to 7.23 per 100,000 inhabitants). The highest incidences of suicide in the Americas are located in Guyana, with 40.8 per 100,000 inhabitants and the lowest rate in Barbados, with 0.362.

Suicidal behavior can be conceptualized as any action or thought that indicates an intention to cause harm to oneself, with the intention of ending one's own life[3]. These behaviors may include suicidal thoughts and

planning, self-harm and suicide attempts, or even dangerous or reckless behaviors[3,4]. The most vulnerable to suicide are people between 15 and 29 years old, or over 70, males, and people with psychiatric disorders, mainly depression and chemical dependency[3]. In addition, hopelessness, lack of social support and insufficient mental health care available are also risk factors for suicide. Regarding the latter, one of the main obstacles to treating people at risk and preventing suicide are the stigmas and taboos that tend to be related to the topic[5-8].

Some studies have shown that the stigmatization of suicidal behavior is associated with a series of individual and structural consequences for those affected and their families[6,9,10]. These consequences include increase of emotional distress, decrease of self-esteem, as well as social disadvantages, such as discrimination. Furthermore, stigmatization can lead to a reduction in help-seeking behavior and use of health-care services[9]. Irwin Goffman initially proposed the concept of stigma in the 1980s, who defined the term as a type of label or social mark that disqualifies an individual or group, conceiving them as unworthy of esteem and social acceptance. The characteristics that will be considered for stigma can be physical (like deformities or birthmarks), moral (such as behaviors considered socially inappropriate, like addictions) or tribal (such as belonging to a minority group). Goffman emphasized that stigma can lead to negative consequences, such as exclusion, marginalization and restrictions on opportunities [11].

Suicidal behavior, throughout history, has assumed different positions, for example, the glorification that, in Japanese culture, conceived of the self-inflicted death of samurai to restore their honor. Also in Japanese culture, suicidal behavior has already figured as a war tactic, especially in World War II, when pilots deliberately crashed their aircraft into American ships, they became known as Kamikazes. More recently, in Eastern culture there are expressions of glorification linked to violent extremist attacks, such as the twin towers of the World Trade Center in 2001. This way, the perception of suicide will always be connected to broad cultural systems[10].

The lack of knowledge about mental illness, along with motivations and ways of preventing suicide, has been identified in literature as an important drive for prejudice, on the part of both, health professionals and the general population, as well as on the part of individuals themselves who exhibit such behaviors[6,7,12]. Some studies have identified correlations between the level of knowledge and stigma related to suicide. For instance, a study conducted with adults in Australia aimed to identify factors associated with stigma and knowledge about suicide[6]. The study identified cultural, sociodemographic aspects are associated with stigma, and knowledge about suicide and people with more knowledge about the topic tend to present less stigmatizing attitudes. In Brazil, only one study of translation and adaptation of scales that can be used to assess the level of knowledge and stigmatizing attitude in the population was identified[13]. Thus, it is necessary to identify stigmas and deepen discussions about suicide, as a tool to assist in the creation of prevention and health education policies.

Therefore, the present study aimed to verify possible correlations between suicidal behaviors, knowledge and stigmas related to the topic, in a group of people identified as being at high risk of suicide, living in two small cities in the countryside of Minas Gerais. Specifically, this study aimed to characterize the levels of knowledge and stigmatizing attitudes in this high-risk sample, and to analyze the difference between stigmas and knowledge in the studied population and the general population, assessed in different standardization studies.

METHOD

Study design

This is a cross-sectional study, which is part of a project on maladaptive schemas and suicide perception in young adults, approved by the Research Ethics Committee (CAAE 80070017.3.0000.5134).

Sample and eligibility criteria

The sample was selected in two cities in the Midwest of Minas Gerais, in the second half of 2019. These cities have similar characteristics, being small and with an extensive rural area. They have primary, secondary and tertiary healthcare equipment, however, they do not have specialized mental health services, such as *Centros de Atenção Psicossocial–CAPS* (Psychosocial Attention Center). Thus, cases of suicidal thoughts are treated in primary and/or secondary care, and suicide attempts are treated more directly in tertiary care.

The eligibility criteria for research subjects were people at high risk of suicide, identified through thoughts and planning, with a history of attempts or the presence of family members who died by suicide. Participants were nominated by the *Saúde da Família* (Family Health Team) and invited to participate in the research. Family Healthcare team is a program composed of doctors, nurses, dentists and community health agents. They are responsible for people who live in a determined territory in the sense of community instead of individuals. 29 patients from the primary healthcare service in the two cities accepted to participate in the study. Among those, eight were excluded because they did not respond to all the research questionnaires, leaving a final sample of 21 patients.

Instruments

Semi-structured interview with sociodemographic questionnaire: the research team produced the interview and questionnaire. Contains items associated with sociodemographic, health aspects and suicide risk behavior.

Stigma of Suicide Scale–Short Form (SOSS-SF) [12] : five-point Likert scale composed of 16 items distributed in three subscales: stigma, isolation/depression and glorification. It aims to evaluate people's perception of individuals who experience suicidal thoughts and the specific behaviors attributed to them.

Literacy of Suicide Scale–Short Form (LOSS-SF) [12]: a questionnaire composed of 12 items that aims to assess knowledge about suicide. The respondent characterizes the item as "true", "false" or "I don't know". The score is obtained by assigning one point for each correct answer and zero points for incorrect and "I don't know", at the end the correct answers are added together.

Self-Reporting Questionnaire (SRQ-20)[13]: self-report instrument composed of 20 yes/no items that aims to assess the presence of common mental disorders. Each yes answer is computed as a final score that can be classified into "typical", "clinical symptoms" and "severe symptoms".

Procedures

Those who agreed to participate signed the Consent Form. When collaborating with the study, the participant was subjected to an individual interview and questionnaire carried out by members of the research team. The approach lasted around an hour and took place in the basic health units that each participant attended, or during home visits.

Statistical analysis

The variables were described in terms of mean and standard deviation or median and interquartile range, depending on the nature of their normal or non-normal distribution. Categorical variables were described by their absolute and relative frequency. The comparison of subgroups of interest was carried out using the Kruskal-Wallis test, as there was more than one group, independent and with a non-parametric distribution.

Validation studies of the SOSS-SF and LOSS-SF scales from different countries were used, with the aim of performing a comparative analysis of the performance of the participants in the present study with the samples from the base studies. A general mean was calculated including validation studies and Cohen's d was used as a measure to assess the difference between group means. Information about the studies is described in the chart below:

Chart 1–Characteristics of the studies used to compare means

Studies	Size Sample	Country	Stigma		Isolation		Normalization		Glorification	
			Mean	SD	Mean	SD	Mean	SD	Mean	SD
Batterham et al., 2013	1405	Australia	2.19	0.83	4.11	0.83	2.45	0.82	7.65	2.47
Ludwig et al., 2021	2002	Germany	-	-	-	-	-	-	7	2.14
Ludwig et al., 2020	2002	Germany	1.95	0.69	3.6	0.84	2.76	0.87	-	-
Aldalavkeh et al., 2020	160	Jordan	3.12	0.77	3.65	0.77	2.24	0.73	5.63	1.85
Jahan et al., 2023	616	India	25.15	6.16	14.48	2.91	9.04	2.69	3.86	1.94
Note: SD: Standard Desviation										

Source: Produced by the authors, 2023

RESULTS

The characteristics of the study participants are shown in Table 1. The sample were predominantly female (95.2%), self-identified as white (47.6%), with a mean age of 42.8 years (SD = 13.0). Most participants had some diagnosis of mental disorder (81%) and SRQ-20 scores classified as "severe symptoms" (42.9%). Patients were divided into three subgroups: 1) never mutilated themselves and did not attempt suicide; 2) did not mutilate themselves, but had attempted suicide; 3) had already mutilated themselves and attempted suicide.

The average score obtained in the stigma questionnaire was similar between the subgroups (p=0.945). Likewise, there was no difference in the average score for the questionnaires on isolation (p=0.900), normalization (p=0.740) and knowledge (0.847).

Table 1 – Descriptive table with the social demographic profile of the study participants

Characteristics	n (%)
Mean age (SD)	42.8 (13.0)
Gender: Female	20 (95.2)
Race: White	10 (47.6)
Religion: Catholic	14 (66.7)
Education: Elementary school	11 (52.4)
Mental-health diagnosis	17 (81.0)
SRQ-20 severe symptoms classification	9 (42.9)
Group 1: never mutilated themselves and did not attempt suicide	6 (28.6)
Group 2: did not mutilate themselves, but had attempted suicide	7 (33.3)
Group 3: had already mutilated themselves and attempted suicide	8 (38.1)
Total	21

Note: SD: standard deviation ; SRQ-20: *Self-Reporting Questionnaire*

Table 3 presents the size of the difference between the average results of the present sample and the average results of the standardization studies (described in the "Method" topic). The results indicated that the high-risk sample differs from the general sample, demonstrating a lower level of knowledge and a higher level in all stigma measures. Effect sizes were large enough across all stigma means.

Table 2–Comparison between groups in the scores of LOSS-SF and SOSS- SF questionnaires

	Stigma		**Isolation**		**Normalization**		**Knowledge**	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Group 1–Never mutilated themselves and did not attempt suicide	10.67	8.73	7.50	4.32	6.50	5.17	5.50	1.87
Group 2–Did not mutilate themselves, but had attempted suicide	11.43	5.47	8.43	4.20	8.14	5.21	6.00	1.63
Group 3–Had mutilated themselves and attempted suicide	11.88	6.40	8.25	3.01	8.25	3.15	6.13	2.75
Total	11.38	6.53	8.10	3.65	7.71	4.35	5.90	2.10
p-value (Kruskal-Wallis test)	0.986		0.869		0.780		0.881	

Note: DP = standard deviation

Table 3–Comparison between the weighted average of standardization studies and the average of the high risk sample

	Knowledge		**Stigma**		**Isolation**		**Glorification**	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Standardization sample (n= 4,183)	6.22	1.99	5.25	1.49	5.18	1.14	3.43	1.11
Total sample (n=21)	5.9	2.1	11.38	6.53	8.1	3.65	7.71	4.35
Cohen's d	0.22		**3.06**		**1.89**		**2.59**	

Note: DP = standard deviation;

Cohen's d classifications above 0.80 are considered high (in bold)

DISCUSSION

The present study aimed to investigate the potential relationship between suicidal behavior, stigma, and knowledge about suicide using semi-structured interviews and structured questionnaires. Risk behaviors likeself-harm, substance use and suicide attempts were common among high-risk individuals. The conducted descriptive analysis revealed the presence of psychiatric symptoms in a significant proportion of the participants. Thus, a relationship was observed between cases of suicide attempts and self-mutilation with psychopathologies, as previously identified in the literature[15,16,17].

Both knowledge and stigma about suicide were at similar levels among all participants, regardless of the type of suicidal behavior. Thus, behaviors such as self-harm or previous attempts did not differentiate levels of knowledge and stigma when considering a risk group. Among the list of adjectives in this structured questionnaire are the following attributes to be assigned to people who take their own lives: courageous, cowardly, dedicated, detached, an embarrassment, immoral, irresponsible, isolated, lonely, lost, noble, pathetic, superficial, strong, stupid, vengeful. These stigmatizing adjectives are widely assigned to people who have suicidal ideation and affect not only

the subject, but all family members, and are directly associated with new attempts at self-mutilation[18,19].

On the other hand, when the group studied in this research was compared to larger and more representative samples of the general population (that is, without necessarily being survivors or being at risk), the results were different, with the group in this study presenting more stigmas and glorification of suicide than the normative sample. Thus, it is important to highlight the evidence of psychiatric symptoms in a large proportion of participants, which may be a cause of social isolation. According to previous authors, social isolation is an element that facilitates the emergence of disorders, mainly those related to psychological suffering caused by suicide[20,21]. Furthermore, social isolation and its manifestations can appear in different ways, in some statements or through attachment to the physical environment where the suicide or act of self-mutilation took place [22].

The normalization score was the lowest among the subscales and similar among participants. Trying to understand suicidal behavior is associated with a normalizing perception[12]. However, what is observed is that the associated and self-perceived social stigmas of suicide have a more negative bias[23]. Therefore, it is common for aspects that normalize or glorify suicide to be less endorsed[6,10,24].

The sample's score on the knowledge questionnaire did not differ significantly from the normative group, different from what would be expected. Previous studies have identified that lack of knowledge about the topic is associated with stigmatizing behavior and with education and age[7, 8]. Furthermore, knowledge about the dimensions of suicide, such as risk and protective factors, helps in the search for adequate treatment and, on the other hand, interferes with the provision of adequate service and support[7,21,22]. Although, studies with healthcare professionals also show lower knowledge than expected[1,25,26]. Therefore, the lack of knowledge does not seem to be a specific characteristic of individuals at risk, but of the population/culture in general.

Factors associated with suicide can be classified into four levels[24]: political, social, cultural and economic. For this research data, we are interested in cultural aspects–media behavior, gun culture, culture of alcohol and drug use, and gender socialization–and social aspects–marital status, family relationships, community integration, and religion. We understand that the negative stigmas related to people who take their own lives circulate with social and cultural reinforcement, also interfere with their social esteem and self-esteem. These aspects seem to feed into other factors raised in this research, for instance, isolation and normalization regarding the acceptability of suicidal behavior.

Although this study presents itself as the first to verify relationships between the presence of suicidal behavior and stigmatization and knowledge about suicide, there are limitations that need to be highlighted. The sample was selected by convenience in academic extension practice, in a short period, in spite, the risk of selection bias is increased. Furthermore, we worked with a relatively small, unrepresentative sample, which does not allow generalization of the results. However, this study opens the door for future analyzes regarding suicide stigmatization behavior, allowing the development of training and awareness programs about suicide , which are closer to the reality of the target audience.

CONCLUSION

The study made it possible to verify the probable relationship between suicidal behavior, stigmas and knowledge about suicide through semi-structured interviews and structured questionnaires. The study showed similar scores between the questionnaires on

stigma, isolation, normalization and knowledge about suicide, when evaluated in subgroups that had already attempted suicide and self-mutilation along with subgroups that had never attempted suicide. This result highlights stigmatization as a social phenomenon and points the way to planning preventive intervention against suicide in public health.

A good measure of preventive action within public health would be the promotion of psychoeducational groups both for people with a history of suicide attempts and for those who present ideation and self-mutilation. Managing a group with these complex characteristics can be challenging. However, the space for sharing and the opportunity to challenge individual and collective stigmas is transformative, making it an inclusive and reflective practice. Another measure would be the implementation of groups of survivors, that is, relatives who lost people who took their own lives. Likewise, the space for sharing and group exchanges can promote the reframing of negative stigmas, the promotion of adequate knowledge on the topic and the downgrading of the normalizing conception of this phenomenon.

The limited size and diversity of the sample are among the limitations of the present study. Therefore, further studies are still needed to delve deeper into these issues and to better understand the impact that these factors have on public health.

REFERENCES

1. De Alcântara Müller S, Silveira Pereira G, Basso Zanon R. Estratégias de prevenção e pósvenção do suicídio: Estudo com profissionais de um Centro de Atenção Psicossocial. Revista de Psicologia da IMED. 2018;9(2):6-23.
2. Suicide Mortality in the Americas – Regional Report 2015-2019. Pan American Health Organization; 2021.
3. World Health Organization. World report on violence and health. Geneva: World Health Organization; 2014.
4. Chen I-Ming, Liao SC, Lee MB, Wu CY, Lin PH, Chen WJ. Risk factors of suicide mortality among multiple attempters: A national registry study in Taiwan. Journal of the Formosan Medical Association. 2016;115(5):364–71.
5. Finkelstein Y, Macdonald EM, Hollands S, Sivilotti MLA, Hutson JR, Mamdani MM, et al. Risk of Suicide Following Deliberate Self-poisoning. JAMA Psychiatry. 2015;72(6):570-75.
6. Batterham PJ, Calear AL, Christensen H. Correlates of Suicide Stigma and Suicide Literacy in the Community. Suicide and Life-Threatening Behavior. 2013;43(4):406–17
7. Ludwig J, Dreier M, Liebherz S, Härter M, von dem Knesebeck O. Suicide literacy and suicide stigma – results of a population survey from Germany. Journal of Mental Health. 2021;1–7.
8. Aldalaykeh M, Dalky H, Shahrour G, Rababa M. Psychometric properties of two Arabic Suicide Scales: stigma and literacy. Heliyon. 2020;6(4):e03877.
9. Reynders A, Kerkhof AJFM, Molenberghs G, Van Audenhove C. Attitudes and stigma in relation to help-seeking intentions for psychological problems in low and high suicide rate regions. Social Psychiatry and Psychiatric Epidemiology. 2013;49(2):231–9.
10. Kennedy AJ, Brumby SA, Versace VL, Brumby-Rendell T. Online assessment of suicide stigma, literacy and effect in Australia's rural farming community. BMC Public Health. 2018;18:846.
11. Erving Goffman. Estigma : notas sobre a manipulação da identidade deteriorada. Rio de Janeiro: Ltc; 1988.
12. Guilherme J, de A, Amanda, Saldanha-Silva R. Tradução e adaptação da "Stigma Of Suicide Scale – Short Form" e da "Literacy Of Suicide Scale – Short Form": evidências preliminares. 2020;4(2):36–43.
13. Oliveira Bernardes Santos K, Araújo TM de, Sousa Pinho PD, Conceição Silva AC. Avaliação de um instrumento de mensuração de morbidade psíquica: estudo de validação do self-reporting questionnaire (SRQ-20). Revista Baiana de Saúde Pública. 2010;34(3):544-60.

14. Ludwig J, Liebherz S, Dreier M, Härter M, von. Die Stigma of Suicide Scale: psychometrische Überprüfung der deutschen Kurzversion (SOSS-SF-D). Psychiatrische Praxis. 2020;47(08):433–9.
15. Teixeira E, Feitoza Siqueira A, Sousa Ferreira D, Ferreira Monteiro W, Pedro Bento Barbosa I. Validação de manual sobre prevenção do suicídio para universitários: falar é a melhor solução. Rev Rene. 2020;21:e42241.
16. Large M, Corderoy A, McHugh C. Is suicidal behaviour a stronger predictor of later suicide than suicidal ideation? A systematic review and meta-analysis. Australian & New Zealand Journal of Psychiatry. 2021; 55(3):254-67.
17. Dyregrov K. What Do We Know About Needs for Help After Suicide in Different Parts of the World? Crisis. 2011;32(6):310–8.
18. Buus N, Caspersen J, Hansen R, Stenager E, Fleischer E. Experiences of parents whose sons or daughters have (had) attempted suicide. Journal of Advanced Nursing. 2013;70(4):823–32.
19. Andrade ICS de, Gomes NP, Correia CM, Lírio JG, Virgens IR das, Gomes NP, et al. Suporte social de familiares e amigos: discurso de pessoas com comportamento suicida. Cogitare Enfermagem. 2019;24: e64230.
20. Tassara IG, Okabayashi NYT, Casaca MCG, Veronez F de S. Prevalência de sintomas psicológicos em tempos de isolamento social / Prevalence of psychological symptoms in times of social isolation. Brazilian Journal of Health Review. 2021;4(1):1295–309.
21. Dos Santos AJ, Ferreira D, Ribeiro O, Freitas M, Correia JV, Rubin K. Isolamento social e sentimento de solidão em jovens adolescentes. Análise Psicológica. 2014;31(2):117–27.
22. Braga LDL, Dell'Aglio DD. Suicídio na adolescência: fatores de risco, depressão e gênero. Contextos Clínicos. 2013;6(1):2-14.
23. Silva T de PS da, Sougey EB, Silva J. Estigma social no comportamento suicida: reflexões bioéticas. Revista Bioética [Internet]. 2015;23:419–26.
24. Stack S. Contributing factors to suicide: Political, social, cultural and economic. Preventive Medicine. 2021;152:106498
25. Ferreira ML, Vargas MADO, Rodrigues J, Trentin D, Brehmer LC de F, Lino MM. Comportamento suicída e atenção primária à saúde. Enfermagem em Foco. 2018;9(4):50-54.
26. Boukouvalas E, El-Den S, Murphy AL, Salvador-Carulla L, O'Reilly CL. Exploring Health Care Professionals' Knowledge of, Attitudes Towards, and Confidence in Caring for People at Risk of Suicide: a Systematic Review. Archives of Suicide Research. 2019;24(sup2):S1–31.

THE AUTHORS DECLARE THAT THERE IS NO CONFLICT OF INTERESTS IN RELATION TO THIS ARTICLE.