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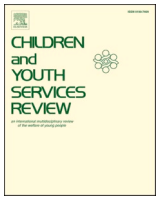

Beyond guidelines: Evaluating the realities of suicide prevention in schools

Jorge-Manuel Dueñas [a], Fabia Morales-Vives [a,*], Janaina Minelli de Oliveira [b]

[a] Psychology, Universitat Rovira i Virgili. Research Center for Behavior Assessment, Tarragona, Spain
[b] Pedagogy, Universitat Rovira i Virgili, Tarragona, Spain

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ABSTRACT

Several studies have highlighted the pivotal role of educational settings in addressing suicide among adolescents. However, the specific needs and effectiveness of suicide prevention protocols in these environments require further exploration, particularly within different educational contexts. This study aims to (1) identify the needs of schools for suicide prevention, (2) assess perceptions of specific suicide prevention guidelines, and (3) explore whether experiences with suicide-related incidents influence these perceptions. We examined 282 schools in Catalonia (Spain), using a mixed methods approach to gather quantitative and qualitative data. The findings indicated significant disparities in the perceived effectiveness of the guidelines, with centers that had encountered actual suicide cases or attempts reporting different challenges compared with those that had not. This study underscores the critical need for tailored training and resources in schools to effectively support suicide prevention efforts, suggesting that the availability of guidelines is insufficient without strategic implementation and support.

1. Introduction

Suicide is a public health problem in most countries (Hoven et al., 2009). In fact, suicide is the second leading cause of death among young people aged 15 to 29 worldwide, after traffic accidents (Zanghì et al., 2022). This statistic highlights the vulnerability of young people to suicide, and the need to address prevention from an early age. Spain also presents worrying data. Specifically, according to the most recent data from the National Institute of Statistics of Spain (2024), 10 children under the age of 15 died by suicide in 2023, with a mortality rate of 0.154 per 100.000 inhabitants in this age group. In addition, 354 deaths by suicide were recorded among young people between the ages of 15 and 29, representing a rate of 4.565 per 100.000 inhabitants. These mortality rates are worrying when analyzed in the context of recent years: in the under 15 age group, the rate was 0.206 in 2020, 0.349 in 2021, 0.183 in 2022, and 0.154 in 2023. In the 15–29 age group, an upward trend is observed, with rates of 4.091 in 2020, 4.304 in 2021, 4.533 in 2022, and 4.565 in 2023. Given their age, they were likely part of the educational system as students; therefore, they could have benefited from prevention activities conducted in their centers. In fact, the educational system can provide a space to detect behaviors that precede completed suicide in such a vulnerable period of life such as childhood, adolescence, and youth. Considering that suicidal behaviors often emerge during adolescence and persist into adulthood (Goldston et al., 2016; Weissinger et al., 2023), providing adequate support in the educational context can have positive long-term consequences.

Educational institutions play a fundamental role in suicide prevention owing to their capacity to detect early warning signs among students, and provide a supportive environment (e.g., Marraccini et al., 2022a; Marraccini et al., 2022b). For instance, previous studies show that students with a support network within the school environment are less likely to develop suicidal behaviors (Coulter et al., 2017; Springer et al., 2006). Furthermore, school interventions are recognized as one of the main mechanisms for preventing suicide among the youth (Carli et al, 2021; Heinrich et al., 2023). In fact, early intervention and the creation of an inclusive and safe school environment have been identified as important protective factors for reducing the risk of suicide among young people (Marraccini & Brier, 2017).

Miller (2021) suggests that suicide prevention in schools needs to take place at three different levels. The first level is primary prevention and should be universal, for all students, as it involves teaching students adaptive skills and competencies that promote their mental health and emotional stability. There is a consensus on the importance of primary prevention, through the development of school policies that promote mental health, and the inclusion of curricular programs that address emotional well-being (Margaretha et al., 2023; Weist & Rowling, 2002).

* Corresponding author.
E-mail address: fabia.morales@urv.cat (F. Morales-Vives).

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Teaching students skills to manage their emotions, resolve conflicts, and develop resilience can significantly reduce stress and depression levels (Ying et al., 2020; Zeng et al., 2018), which are two critical risk factors for suicide (Dueñas et al., 2020). According to Miller (2021), the second level would involve the identification of at-risk cases and the provision of the necessary support (selected interventions for at-risk students). The third level would focus on high-risk cases requiring a more individualized intervention. These activities require collaboration with trained psychologists and mental health services, especially for the second and third levels. It also requires that gatekeepers are adequately trained to identify early signs of emotional distress and to intervene appropriately with students in crisis (e.g. Freedenthal & Breslin, 2010; McConnellogue & Storey, 2017; Ross et al., 2017). Therefore, it is not sufficient to implement a program at one point in time, with only one or two sessions for gatekeepers and without other complementary actions over time (Surgenor et al., 2016). In this sense, the written guidelines and protocols available in schools can play a key role in suicide prevention, as a support and advice tool for gatekeepers over time, complementing other initiatives. In fact, according to Stein et al. (2010), the existence of appropriate prevention protocols is related to the effective implementation of suicide prevention programs at schools. However, although the presence of suicide prevention guidelines in schools is considered advisable, not all schools perceive these protocols in the same way. Evidence suggests that schools with experience of managing suicide-related incidents tend to evaluate these protocols more critically than those that have not faced similar situations (MacNeil & Topping, 2009; Marraccini & Brier, 2017). This highlights the importance of knowing how policies are perceived in schools and what variables are associated with these perceptions, which is the focus of the current study.

Despite growing awareness of the need for suicide prevention in schools, several barriers hinder the effective implementation of these strategies. One of the main limitations reported by educators is the lack of training and adequate resources to address mental health issues, which generates insecurity and fear among school staff when managing high-risk situations (Hatton et al., 2017; Nadeem et al., 2011; Whitney et al., 2011). Additionally, many teachers report not having enough time or institutional support to apply existing protocols or actively engage in the early identification of at-risk students (Hatton et al., 2017; Nadeem et al., 2011; Stein et al., 2010). The shortage of mental health professionals in schools is also a common challenge, as many countries lack trained psychologists to provide specialized support to students (Hendricker et al., 2022; Johnson & Brookover, 2020). Furthermore, the lack of communication and coordination between schools and external mental health services often results in a delayed or ineffective response to mental health problems, increasing the risk of warning signs going unnoticed (Weist et al., 2012).

Another critical barrier is the ineffective implementation of suicide prevention guidelines and protocols, which are often underutilized due to their limited practical applications in real education settings. In many cases, the guidelines are distributed passively as digital documents that teachers can consult at their discretion, thereby reducing their visibility and effectiveness. Specifically, a study conducted among the Spanish population analyzed teachers' perceived effectiveness in using digital tools in Spain and concluded that, although digital resources are widely distributed, the lack of specific training in their application reduces the effective implementation of these guidelines in the school environment (García-Martín et al., 2023).

1.1. This study

This research aims to identify the experiences and needs of Catalan schools in suicide prevention. More specifically, this study aims to (1) assess the perceived needs of schools related to suicide prevention, (2) evaluate how the schools appraise the documents "Guide to approaching suicidal behavior and non-suicidal self-harm at the educational center" (Generalitat de Catalunya, 2022) and the "Tackling youth suicide: guidelines and tools for youth entities. Protocol" (Consell Nacional de la Joventut de Catalunya, 2020), and (3) examine whether the perceptions of these guidelines differ between centers that have had to manage verbalizations and suicide attempts, and those that have not encountered these issues.

The document "Guide to approaching suicidal behavior and non-suicidal self-harm at the educational center (Generalitat de Catalunya, 2022)" is the result of the collaboration between the Health Department and the Education and Professional Training Department of the Generalitat de Catalunya (Spain) as part of the Plan for the prevention of suicide in Catalonia 2021–2025, following the strategic lines of the World Health Organization (2014) in relation to suicide prevention. This guide is intended for educational professionals who deal with students in compulsory and post-compulsory schooling. It presents guidelines on how to act in a coordinated way between educational and health agents when faced with a verbalization of suicidal intent, a suicide attempt, or death by suicide. It also provides guidance on how to deal with non-suicidal self-harm. It is a very practical guide, offering advice on how to respond to such situations within an educational setting. For example, regarding suicidal verbalizations, it details which comments should be avoided, why it is important to keep conversations private and quiet, who should be informed, and so on.

The document "Tackling youth suicide: guidelines and tools for youth entities. Protocol" (2020) was edited by the *Consell Nacional de la Joventut de Catalunya* (National Youth Council of Catalonia) in collaboration with the *Associació per a la Prevenció del Suïcidi i l'Atenció al Supervivent* (Association for the Prevention of Suicide and Care for the Survivor, APSAS) from Catalonia (Spain). The guide offers strategies for preventing youth suicide and supporting those who are grieving. It is intended for individuals working in or collaborating with youth organizations, including schools, to ensure that they do not feel helpless in the event of a traumatic incident, such as an attempted or completed suicide. The guide is based on the idea that communities should be well informed about suicide so that they can recognize both explicit and implicit requests for help and respond more quickly and appropriately. It includes epidemiological data and relevant information about risk and precipitating factors, as well as red flags and how to identify a potential case. It also explains how to act before, during and after a suicide attempt or suicide, among other issues.

Based on our first objective, we expect to find diverse perceptions depending on different factors including the level of knowledge of the teaching staff, the training received, and the previous experiences of the center in relation to suicidal behavior (ideation, verbalizations, attempts, or completed suicide). This hypothesis arises from the lack of previous studies that specifically analyze these aspects. Regarding the second objective, and considering the previous results reported in the literature, we expected schools with previous experience in crises to be more demanding with the protocols and have a more negative perception. As explained above, literature shows differences in the perception of suicide prevention protocols between schools with and without experience in managing suicide crises (MacNeil & Topping, 2009; Marraccini & Brier, 2017). Although we are not aware of any previous studies that have evaluated these aspects focusing on protocols or action guidelines for suicide prevention, previous related research shows a trend. Specifically, previous studies show that the level of knowledge of teaching staff and the training received significantly influence the perception and application of protocols for the prevention of suicidal behavior, suggesting that these factors could determine the effectiveness of the guidelines implemented in schools. In fact, some studies, such as that of Wasserman et al. (2015), indicate that programs such as the Youth Aware of Mental Health (YAM) significantly reduce suicidal ideation and behavior. However, they are not necessarily more valued in schools with previous experience in crisis management. Similarly, Marraccini and Brier (2017) suggest that educational staff in schools that have faced suicide crises tend to evaluate prevention protocols with

greater scrutiny and care, because these experiences influence their perception of their effectiveness. However, MacNeil and Topping (2009) highlight that educational staff tend to be more critical and review protocols in greater detail after a crisis, demanding improvements based on their experience.

We also expect that the lack of training, resources, and mental health professionals in schools will hinder the effective implementation of suicide prevention protocols. Previous studies show that prevention programs are less effective without organized support and resources, and schools struggle to implement protocols effectively (Stein et al., 2010).

2. Materials and methods

2.1. Sample

The sample consisted of 282 schools in Catalonia (Spain). Of these, 239 (84.8 %) and 43 (15.25 %) were public (government-funded) and private centers, respectively. According to the open online directory from the Catalan Department of Education, 78.7 % of Catalan education centers are public. The proportion of public schools in our sample was slightly higher, but close to that reported by the Catalan Department of Education. Regarding the respondents' positions at the center, 161 (57.1 %) were school directors, 24 (8.5 %) were pedagogical coordinators, 17 (6.0 %) were directors of studies, 6 (2.1 %) were secretaries, and 74 (26.2 %) were other members of the center.

Catalan schools count with the support of the Psychopedagogical Advice and Guidance Teams, which provide psychopedagogical and social service for schools and the educational community. They carry out their activities in schools and their surroundings in close collaboration with other services and professionals in the sector. These mental health professionals have not been included in the sample, since they are not part of the school staff.

Table 1 shows the number of centers that taught at different educational levels in our sample.

Table 1
Frequencies and percentages of centers that taught the different educational levels.

Educational level	Frequency	Percentage
Infant education	13	4.6 %
Infant and primary education	93	33.0 %
Infant, primary and secondary education	22	7.8 %
Infant, primary and secondary education, and professional training	4	1.4 %
Infant, primary and secondary education, and Bachelor's degree	4	1.4 %
Primary education	14	5.0 %
Primary education and artistic education	1	0.4 %
Primary education and sporting education	1	0.4 %
Primary and secondary education	2	0.7 %
Primary and secondary education, and professional training	1	0.4 %
Secondary education	50	17.7 %
Secondary education and Bachelor's degree	15	5.3 %
Secondary education, Bachelor's degree, and professional training	10	3.5 %
Secondary education and professional training	12	4.3 %
Secondary education, sporting education, and Bachelor's degree	1	0.4 %
Secondary education, professional training, sporting education, and Bachelor's degree	1	0.4 %
Professional training	7	2.5 %
Bachelor's degree and artistic education	2	0.7 %
Artistic education	7	2.5 %
Adult education	13	4.6 %
Special education	8	2.8 %
Languages education	1	0.4 %

2.2. Instruments

We administered an *ad hoc* self-administered online instrument, specifically developed for the current study. This instrument was designed in accordance with the guidelines proposed by the RAND Suicide Prevention Program Evaluation Toolkit (Acosta et al., 2013), which offers a structured and evidence-based framework for assessing the effectiveness of suicide prevention initiatives. As mentioned above, our study aimed to evaluate the dissemination and impact of two suicide prevention documents within schools in Catalonia: *Guide for Addressing Suicidal Behavior and Non-Suicidal Self-Harm in the Educational Center* (2022) and *Let's Face Youth Suicide: Guidelines and Tools for Youth Organizations Protocol* (2020). For this reason, the instrument used in the current study includes questions aimed to assess both the penetration of these documents – that is, their distribution and use in practice – and the perceptions of educational professionals regarding their experiences, challenges, and needs related to suicide prevention. By collecting both quantitative and qualitative data, this study contributes to the understanding of how policy tools are received in educational settings and highlights opportunities for enhancing their practical implementation.

The instrument used in this study includes a set of items with different response formats (binary items, Likert-type items, multiple choice items, and items with an open response format). The instrument is structured as follows:

- An initial section regarding ethical issues. The participants were informed of the objectives of the research, and that their data and responses would be kept anonymous. They were also informed that participation was voluntary, without remuneration. Participants were asked to provide informed consent to continue responding to the survey.
- Three questions about educational center characteristics:
  - Public or private.
  - Educational levels taught at the center.
  - The respondent's position at the center.
- Five binary questions with "yes" or "no" answers, following RAND's recommendations (Acosta et al., 2013). More specifically, the following questions were assessed:
  - If the educational center was aware of the following publications: "Guide to approaching suicidal behavior and non-suicidal self-harm at the educational center" (Generalitat de Catalunya, 2022), and "Tackling youth suicide: guidelines and tools for youth entities. Protocol" (Consell Nacional de la Joventut de Catalunya, 2020).
  - If the educational center had had to manage suicidal verbalization during the 2022–2023 academic year.
  - If the educational center had had to manage suicidal intent during the 2022–2023 academic year.
  - If the educational center had had to manage suicide during the 2022–2023 academic year.
- The participants who were aware of the above-mentioned publications were further asked two open-ended questions to explain the treatment they had received at their educational center (one open-ended question for each publication).
- The participants who were aware of the above-mentioned publications were presented six items on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). According to the RAND's recommendations (Acosta et al., 2013), this allows collecting useful data for assessing how the schools appraise the documents under study. The items were the following
  - It helps school staff to be more effective in suicide prevention.
  - It is useful for the prevention of suicide in schools.
  - It addresses the needs of schools in terms of suicide prevention.
  - It is easy to understand.
  - It is simple to apply.
  - It is recommended for all school staff.

- A final open-ended question that required participants to explain their perception regarding the experiences and needs of schools in the field of suicide prevention.

2.3. Procedure

This research followed the guidelines of the Spanish Organic Law 15/1999 and the Spanish Agency for Data Protection, which regulates the fundamental right to data protection in accordance with the principles of the Declaration of Helsinki. This study was approved by the Research and Innovation Ethics Committee of Universitat Rovira i Virgili (CEIPSA-2024-PR-0019).

First, we consulted the list of schools in Catalonia (Spain) and obtained their contact details, which are publicly available on the Catalan Department of Education website.

Second, we contacted 5467 schools in Catalonia from this list by email, informing them of the study, and asking them to participate by answering an online survey. Of these centers, 282 participated in this study. The response rate for this study was 5.25 %, which is a relatively low percentage. However, this was not unexpected given the theme of the study, the context and characteristics of the target population. One key reason is the considerable administrative and pedagogical burden typically experienced by school staff, which significantly limits their availability to participate in voluntary research initiatives. School leaders and educators often face demanding workloads, time constraints, and competing priorities that reduce their capacity to engage in additional tasks, particularly during peak periods of the academic calendar (Befort et al., 2008; Zibrowski et al., 2015). Additionally, the subject matter (suicide prevention in educational settings) is inherently sensitive. Potential participants may have been reluctant to engage in this study due to concerns about stigma, institutional reputation, or emotional discomfort, particularly if they had experienced suicide-related incidents within their communities. Despite this expected reluctance on the part of centers, almost 300 centers participated in this study, which is not a small number. Furthermore, the sample includes a broadly representative distribution of public and private schools in Catalonia, with a high proportion of respondents in leadership positions.

As previously explained, the administered survey contained three open-ended questions among other items. The responses to the open-ended questions were categorized according to their content to facilitate the analysis and interpretation of these items, following the guidelines proposed by Miles et al. (2014) and Rincon (2014). In other words, responses with similar content were grouped into a common category. In order to carry out the codification, it was kept in mind that the number of categories should be as small as possible (since many categories with very low frequencies do not allow to draw relevant conclusions). However, two items had a variety of many answers, and some responses were unclear. For this reason, the answers with a frequency of one were grouped together as “Others”. Following the guidelines mentioned above, before coding a particular item, 25 % of responses to that item were randomly selected (excluding participants who did not answer it), and a list of responses and their frequencies was compiled. According to their content, each type of response was assigned a number (category code). The three authors of the study reached a consensus on this initial proposal of categories. Then, two of the authors categorized the entire item (each author separately), adding new categories for response types not included in the initial proposal. The two authors then compared their newly added categories to assign a category code, using the same number for common categories. In all items, the mean-square contingency coefficient was higher than 0.80, suggesting good consistency between raters (Yule & Kendall, 1950). In cases where there were discrepancies in the categorization of some responses, the third researcher acted as a mediator to resolve disagreements and reach a consensus.

The frequencies, percentages, means, and standard deviations were calculated for each variable. Student’s *t* tests, Mann-Whitney U and chi-square analyses were further performed. Cohen’s d was used to estimate the effect size. All analyses were performed using SPSS 20.0.1.0.

3. Results

Regarding the first goal of this study (exploring the perceived needs of schools related to suicide prevention), Table 2 shows the frequencies and percentages of the answers provided by the participants to the final open-ended question of the survey. It is noteworthy that 100 respondents did not answer this question, as there was no obligation to. Table 2 clearly shows that the most frequent answers were related to a lack of knowledge, experience, training, and resources for teachers, making it difficult for them to adequately manage students’ suicidal ideation and behavior related problems. Several participants also highlighted the need to include psychologists and other health professionals in the school staff, as these professionals could manage these situations more effectively. Some participants further emphasized that teachers felt insecure and unable to manage these situations. Other participants stressed the need for communication and coordination with professionals as well as with people involved outside the center (families, external mental health professionals who attend to these children, the government’s Child and Youth Mental Health Centers, etc.).

Table 2
Frequencies and percentages of the participant’s answers about their perceptions regarding the experience and the needs of schools in the field of suicide prevention.

Perceptions	Frequency	Percentage
Lack of knowledge, experience, training and resources for teachers	37	20.3
There have not been any cases in our school center	20	11.0
Inadequate response or lack of agility in the response of the government’s Child and Youth Mental Health Centers	12	6.6
Lack of psychologists and mental health specialists as part of the school staff	10	5.5
Mental health and suicidal behavior is an issue in schools; therefore, it is important that it is properly addressed.	11	6.0
Other issues should be addressed at schools: Emotional education, promotion of self-esteem, bullying problems, and attention to the earliest stages of suicide, rather than addressing these behaviors in later stages.	11	6.0
Increase in mental health problems and suicidal behavior in recent years	9	4.9
There have been some cases in their centers and they have followed the protocol, referring these students to the center’s psycho-educational services or to external services.	7	3.8
Need for effective contact, advice, and coordination with professionals	7	3.8
The protocol is useful for teachers and schools	7	3.8
Necessity of communication and coordination with people involved outside the center (psychologists, psychiatrists, families, etc.).	6	3.3
Teachers feel insecure when they have to deal with these students, the situation overwhelms them	4	2.2
It should be the responsibility of mental health professionals.	3	1.6
Lack of effective protocols and resources at the institutional level	3	1.6
The protocols and the information should be available for all teachers	2	1.1
There are issues beyond the school (social networks, family problems, etc.) against which the school can do little	2	1.1
There is a lack of support for teachers and tutors who have pupils who self-harm or who have experienced suicide.	2	1.1
It is important to listen to the students’ problems, worries, difficulties, etc.	3	1.6
Others (unclear or not very specific answers, or answers reported by only one center)	26	14.3

However, others expressed concern about the poor functioning of the government's child and youth mental health centers. According to these participants, these centers are overcrowded (because there are not enough centers or professionals to meet the high demand), they take too long to attend to students, they do not arrange enough visits, or they administer medication too early. Furthermore, it seems that these centers do not know the protocols of the schools, which makes it difficult to coordinate with them. While some participants stated that they had not had any cases of suicidal behavior in their schools, others stated that there has been an increase in mental health problems in schools in recent years, or they recognized that mental health and suicidal behaviors are issues in schools, and that this problem should be addressed appropriately. Some centers have encountered specific cases of varying severity, which they have had to manage using established protocols. Moreover, some participants highlighted that the existing protocols are useful for centers and teachers; however; two participants considered that there was a lack of effective protocols and resources at the institutional level.

Regarding the second goal of this study, the perception of two existing guides to manage suicidal behaviors at school, it should be considered that most of the sample (91.8 %) did not know the "Tackling youth suicide: guidelines and tools for youth entities. Protocol" (Consell Nacional de la Joventut de Catalunya, 2020). In contrast, only 36.5 % did not know the "Guide to approaching suicidal behavior and non-suicidal self-harm at the educational center" (Generalitat de Catalunya, 2022). Tables 3 and 4 show the means and standard deviations of the Likert items related to the perception of each of these guides, for participants who already knew about them. Regarding the guide published in 2022, all the means range between 4.30 and 5.37 (out of 7). This means that, generally, this guide is considered relatively useful and helpful in preventing suicide at schools, comprehensible, and applicable, recommendable for all school staff, and addresses the needs of schools regarding suicide prevention. The highest mean was for the item about the guide being recommendable for all school staff. It should be noted, however, that this perception of effectiveness is limited to those schools that were aware of the measure or had implemented it, which is less than 10 % of the sample. Regarding the second guide, published in 2020, the means were very similar, ranging between 4.55 and 5.27; however, in this case, the item about the guide being comprehensible had the highest mean. However, as none of these means are over 6.0, it seems that the participants considered a margin of improvement, and that these guides are not enough to solve the problems related to suicidal behavior in school, as it also shows the results for the open-ended question explained above.

As shown in Table 5, 11.8 % of the participants who knew of the guide published in 2022 stated that no particular actions had been conducted in their centers. They recognize that they had received the guide, and some stated that they had read it, but no further actions had been taken. In some centers, the document was shared with teachers, including the document in an online shared file, among other documents, without providing any information. However, this may result in the document going unnoticed by teachers, which would prevent them from using it in cases of doubt or need. In contrast, many participants said that the teachers at their centers were informed about the guide. However, they had done a joint reading with teachers, studied the text with them, or implemented awareness-raising activities related to this guide in only a few cases (3.4 %). In other centers, they had also delivered a guide to the psychopedagogy team, cycle coordinators, orientation team, and so on. In some centers, these professionals helped inform teachers about the content of the guide. Unfortunately, in very few centers (5.1 %), all the staff were informed about the guide. Furthermore, in some centers, this guide has been used for consultation, or as a tool to attend to students with suicidal ideation or behaviors, or even as a guide to develop action protocols, update the center coexistence project, etc.

Regarding the guide published in 2020, the most common action (26.1 %) was to inform teachers about it, as can be seen in Table 6. In several centers (21.7 %), the psychopedagogical team, orientation team, and other professionals were also informed. Despite the role that other workers may play in the prevention of these behaviors, only one center provided information to all the school staff. In some centers, the document was used as a consultation guide, applied in some cases that occurred in the center, or used to develop an action protocol for this type of behavior. Furthermore, as with the other guide, in some centers, this document was made available to teachers (for example, it was included in a shared online file, among other documents) without providing further information about it.

Lastly, regarding the third goal of this study, which refers to the differences between the perceptions of the centers that have had to manage verbalizations, attempts, and/or completed suicides during the 2022–2023 academic year, and those that have not had to. One participant was excluded from these analyses because they answered that there were no cases of verbalizations, attempts, or completed suicides; in the last open-ended item, they stated the opposite. Furthermore, there were three missing values for the verbalization item. Of the centers, 45.2 % stated that there had been verbalizations, 14.6 % stated that there had been attempts, and 2.8 % stated that there had been completed suicides during the 2022–2023 academic year. In fact, 45.9 % of the centers had experienced verbalizations, attempts, and/or consummated suicides, which is a worrying figure. Regarding the perceptions of the 2022 guidelines, Table 7 shows the mean comparisons (Student's *t* test) between the centers that knew this guideline and had reported cases of verbalizations, attempts, and/or completed suicides, and the centers that also knew this guideline but had not reported any cases of verbalizations, attempts, and/or completed suicides. Table 7 clearly shows that, although the difference between the two groups was only significant for one of the items, there seems to be a tendency for centers with cases related to suicidal behavior to report a lower perception of these guidelines. More specifically, the group with cases of suicidal behavior had a significantly lower mean score on the item relating to the guidelines addressing the needs of schools in terms of suicide prevention, with a small effect size.

Regarding the 2020 guidelines, Table 8 shows the results of the comparison between the two types of centers. It should be considered that very few participants knew about these guidelines, and consequently, the size of these groups was very small, as shown in the table. Therefore, in this case, we performed the Mann-Whitney *U* Test instead of the Student's *t* test. In Table 8, besides the mean rank for each group and the results of the Mann-Whitney *U* Test, we additionally report the

Table 3
Means, Standard deviations and percentage of responses in the Likert items about the "Guide to approaching suicidal behavior and non-suicidal self-harm at the educational center" (Generalitat de Catalunya, 2022).

			Percentage of responses						
	Mean	Standard deviation	1	2	3	4	5	6	7
Item 1. It helps school staff to be more effective in suicide prevention	4.87	1.50	1.2	7.0	11.7	15.2	29.2	20.5	15.2
Item 2. It is useful for the prevention of suicide in schools	4.49	1.53	1.2	12.9	12.9	18.2	27.1	18.8	8.8
Item 3. It addresses the needs of schools in terms of suicide prevention	4.30	1.64	3.5	14.6	14.6	17.5	22.2	19.9	7.6
Item 4. It is easy to understand	5.19	1.47	0.6	4.7	10.5	14.5	19.2	30.2	20.3
Item 5. It is simple to apply	4.66	1.56	1.8	10.7	11.8	14.8	29.6	19.5	11.8
Item 6. It is recommended for all school staff	5.37	1.60	1.2	4.0	13.3	8.1	16.8	24.9	31.8

Table 4
Means, Standard deviations and percentage of responses in the Likert items about the "Tackling youth suicide: guidelines and tools for youth entities. Protocol" (Consell Nacional de la Joventut de Catalunya, 2020).

			Percentage of responses						
	Mean	Standard deviation	1	2	3	4	5	6	7
Item 1. It helps school staff to be more effective in suicide prevention	4.90	1.52	0	10.0	15.0	0	35.0	30.0	10.0
Item 2. It is useful for the prevention of suicide in schools	4.74	1.42	0	4.3	21.7	13.0	26.1	26.1	8.7
Item 3. It addresses the needs of schools in terms of suicide prevention	4.55	1.44	0	4.5	27.3	13.6	27.3	18.2	9.1
Item 4. It is easy to understand	5.27	1.35	0	0	13.6	13.6	27.3	22.7	22.7
Item 5. It is simple to apply	4.55	1.44	0	9.1	18.2	13.6	36.4	13.6	9.1
Item 6. It is recommended for all school staff	5.00	1.63	0	4.5	22.7	9.1	18.2	22.7	22.7

Table 5
Frequencies and percentages of the participant's answers about the treatment that the following document has received at their educational center: "Guide to approaching suicidal behavior and non-suicidal self-harm at the educational center" (Generalitat de Catalunya, 2022).

Participant's answers	Frequency	Percentage
Teachers have been informed	67	37.6
No particular action, apart from receiving and reading the text with interest.	21	11.8
Professionals in charge of the school (e.g., management team, psychoeducation team, cycle coordinators, diversity committee, etc.) have been informed.	19	10.7
The guide has been consulted and/or applied in those cases that have occurred in the center.	15	8.4
All the staff has been informed (not only teachers)	9	5.1
A summary of the guide, a power point or a monograph has been developed to facilitate the diffusion to teachers	4	2.2
Joint reading, study of the text and awareness-raising activities for teachers.	6	3.4
It is used as a guide for consultation and use	5	2.8
It has been shared with the psychopedagogy team and teachers	4	2.2
Used as a guide to develop action protocols, update the coexistence project, etc.	3	1.7
It has been made available to teachers, without any additional action or information.	3	1.7
In phase of implementation and presentation of the information to teachers	2	1.1
The psychopedagogical team knows the guide and is able to use the protocol when necessary.	2	1.1
Others (unclear or not very specific answers, or answers reported by only one center)	18	10.1

Table 6
Frequencies and percentages of the participant's answers about the treatment that the following document has received at their educational center: "Tackling youth suicide: guidelines and tools for youth entities. Protocol" (Consell Nacional de la Joventut de Catalunya, 2020).

Participant's answers	Frequency	Percentage
Teachers have been informed	6	26.1
The psycho-pedagogy team, the orientation team, and other specific professionals, have been informed	5	21.7
No particular action, apart from receiving and reading the text with interest	2	8.7
It has been made available to teachers, without any additional action or information	2	8.7
It is used as a consultation guide, or it has been applied in some cases that have occurred in the center	2	8.7
In phase of implementation and presentation of the information to teachers	1	4.3
All the staff has been informed (not only teachers)	1	4.3
Used as a guide to develop an action protocol for this kind of behaviors	1	4.3
Others (unclear or not very specific answers)	3	13.0

means and standard deviations of the items. As shown in the table, although there are no significant differences between the groups for any of the items, the means and the mean rank of some items are seemingly higher for the group that has had cases of suicidal behavior in their centers. If the groups had been larger, some of these differences could have reached significance. However, there is need for further studies with larger samples to verify this.

In addition to the objectives of this study, we also analyzed whether there was a relationship between having had cases of verbalizations, attempts, and/or completed suicides during the academic year 2022–2023, and the fact of knowing each guideline. Table 9 presents the frequencies obtained for each guideline. Regarding the 2022 guideline, both variables are significantly related, χ^2 (1, N = 278) = 28.33, $p <$ 0.01. As shown in the table, most of the centers that did not report cases of suicidal behavior did not know about these guidelines, in contrast to the centers that did report cases. However, there both variables for the 2020 guidelines are not related, χ^2 (1, N = 278) = 0.63, p = 0.43, implying that having had cases or not at the center does not imply a greater or lesser degree of knowledge of this guide.

4. Discussion

This study primarily aims to explore the perceived needs of schools in Catalonia regarding suicide prevention, assess the perception of existing guidelines, and analyze the differences in perceptions of these guidelines between schools that have managed cases of verbalization, attempts, and completed suicides, and those that have not had to. The findings are discussed based on the results obtained.

One of our most notable findings was that 20.3 % of the participants indicated that teachers' lack of knowledge, experience, training, and resources was a significant barrier to suicide prevention. This result aligns with those of previous studies that highlight the lack of preparation by educational staff to manage suicidal behaviors (Hatton et al., 2017; Nadeem et al., 2011). Studies suggest that although teachers may have a relevant role in identifying early signs of risk, many feel insecure when facing such complex situations (Marraccini & Brier, 2017). This finding underlines the urgent need to provide adequate training to education professionals, consistent with other studies such as Stein et al. (2010) and Forsman et al. (2015), who suggest that training programs targeting school personnel are essential to improve the effectiveness of detecting and intervening in suicidal behavior. These findings may be explained by the fact that teachers' knowledge of the guidelines may be strongly linked to interventions after suicidal behaviors are identified, rather than to prevention. This suggests that many training programs mainly focus on how to act once a risk has been detected, disregarding the teaching of preventive strategies that could reduce risk before the problem manifests. It is essential that training programs not only cover interventions, but also reinforce the preventive component, helping teachers recognize early signs and foster an environment that reduces risk situations from the onset.

Furthermore, 5.5 % of participants highlighted the school staff's lack of psychologists and other mental health specialists, reflecting a challenge that is widely documented in literature (Hendricker et al., 2022). Scandinavian countries have responded to this need by integrating

Table 7
Perceptions of the 2022 guidelines: Mean comparisons between centers that reported cases of verbalizations, attempts and/or completed suicides, and centers that did not.

Item	Yes (N = 101)		No (N = 67)		Student' *t* test			
	M	*SD*	*M*	*SD*	*t*	*df*	*p*	*d*
1. It helps school staff to be more effective in suicide prevention	4.78	1.55	5.07	1.37	1.25	166	0.21	–
2. It is useful for the prevention of suicide in schools	4.35	1.60	4.75	1.40	1.65	165	0.10	–
3. It addresses the needs of schools in terms of suicide prevention	4.10	1.65	4.63	1.57	2.07	166	0.04	0.33
4. It is easy to understand	5.09	1.52	5.40	1.38	1.36	167	0.18	–
5. It is simple to apply	4.54	1.60	4.88	1.48	1.41	164	0.16	–
6. It is recommended for all school staff	5.30	1.66	5.51	1.50	0.84	168	0.40	–

Table 8
Perceptions of the 2020 guidelines: Mean rank comparison between centers that reported cases of verbalizations, attempts and/or completed suicides and centers that did not.

Item	Yes (N = 10)			No (N = 9)			Mann-Whitney *U* Test		
	M	*SD*	Mean rank	*M*	*SD*	Mean rank	*U*	*p*	*d*
1. It helps school staff to be more effective in suicide prevention	5.30	1.64	11.50	4.78	1.09	8.33	60.00	0.24	–
2. It is useful for the prevention of suicide in schools	4.92	1.44	11.67	4.80	1.23	11.30	62.00	0.92	–
3. It addresses the needs of schools in terms of suicide prevention	4.58	1.38	10.63	4.78	1.39	11.50	49.50	0.75	–
4. It is easy to understand	5.50	1.31	11.63	5.22	1.30	10.17	61.50	0.60	–
5. It is simple to apply	4.50	1.51	10.42	4.89	1.17	11.78	47.00	0.65	–
6. It is recommended for all school staff	4.83	1.64	10.00	5.44	1.59	12.33	42.00	0.42	–

Table 9
Frequency of participants who knew each guide according to whether they had had suicide cases at the center.

	Some suicide behaviors	No suicide behaviors
Knew the 2022 guidelines	103	73
Did not knew the 2022 guidelines	26	76
Knew the 2020 guidelines	12	10
Did not knew the 2020 guidelines	117	139

psychologists into schools to facilitate faster access to psychological care for at-risk students (Kimber et al., 2008; Wang et al., 2022). However, in the Spanish context, the need for more professionals continues to be a significant barrier, requiring substantial investment in specialized human resources within the education system. Another barrier is the poor functioning of the government's child and youth mental health centers, which do not know the protocols of the schools, making it difficult to coordinate with them. Previous studies suggest that communication between schools and mental health centers, in collaboration with families, is key to students' reintegration into school (e.g., Marraccini et al., 2024), but this is a challenge that has not yet been achieved in the Spanish context.

The data also reveal that a significant number of schools (37.6 %) informed teachers about the "Guide to addressing suicidal behavior and non-suicidal self-harm in schools," but the entire staff was informed only in 5.1 % of the cases. This result is consistent with studies indicating that, although guidelines and protocols are available, their practical implementation is often limited (García-Martín et al., 2023). In this regard, the literature underlines the importance of more active implementation of these resources. Rather than simply sharing documents, it is crucial to conduct joint training sessions and awareness-raising activities to ensure that educational staff feel empowered and supported when applying the guidelines in real-life situations (Brown et al., 2018; Nadeem et al., 2011).

Moreover, the results indicate that 11.8 % of the centers aware of the 2022 guidelines did not take any particular action, limiting themselves to reading the document. This finding highlights the need to promote greater awareness of the importance of these protocols and the urgency to integrate them into the dynamics of the center more actively. Studies such as Pickering et al. (2018) suggest that prevention programs should go beyond the passive distribution of information, and should include initiatives that encourage the active participation of staff in suicide prevention.

Regarding the evaluated guides, the general perception of participants familiar with the documents under study is that both guides were helpful and comprehensible, with average scores between 4.30 and 5.37 on a Likert scale. However, none of the items exceeded a score of 6, indicating that participants considered there was room for improvement regarding the usefulness of these guides in addressing suicide problems in schools. As mentioned above, this perception of effectiveness is limited to those centers that were aware of the guidelines or had implemented them, which for the guide published in 2022 is less than 10 % of the sample. The results are consistent with those of previous studies, indicating that, although protocols are helpful, they are often perceived as insufficient to fully address the needs of schools (Kodish et al., 2020). For example, in the case of the 2022 guidelines, participants who had managed cases of verbalizations, attempts, or completed suicides exhibited a significantly lower perception of the guidelines' ability to address the needs of schools in terms of suicide prevention, suggesting that schools with closer experience with these situations may identify gaps in the effectiveness of the guidelines. This result is consistent with the observations of Marraccini and Brier (2017), who found that the perception of the effectiveness of suicide prevention programs may be affected by schools' previous experiences with suicidal crises. Similarly, MacNeil and Topping (2009) argue that educational personnel tend to adopt a more critical and detailed stance when evaluating suicide prevention protocols after experiencing a crisis. After experiencing a crisis, school staff members demand revisions and improvements to these protocols to seek more effective and adaptable approaches that better respond to the complexity of real situations. This indicates that schools that have experienced previous crises are more aware of the limitations of existing procedures, and tend to promote the implementation of more comprehensive and effective measures. Therefore, revising protocols by institutions that have experienced crises could be a good practice for revising prevention, intervention, and postvention protocols.

Schools that had managed verbalizations, attempts, or completed suicides during the 2022–2023 school year tended to perceive the guidelines less positively than those that had not had to manage these cases. This finding is outstanding as it reflects the need to adapt protocols to the realities of schools facing more severe crises. As indicated in

the literature, schools that have experienced risk situations tend to have a more critical view of protocols, suggesting that they should be flexible enough to adapt to more demanding contexts (Carli et al., 2021). This phenomenon has also been analyzed by Kodish et al. (2020), who noted that suicide prevention protocols should be continuously evaluated to ensure that they remain effective in environments with high suicide rates.

Beyond teacher training, the literature emphasizes several critical institutional actions that schools can take to enhance suicide prevention efforts. The development of clear, comprehensive suicide prevention policies and protocols is deemed essential to ensure timely and coordinated responses in moments of crisis (Singer et al., 2019). Establishing multidisciplinary school-based mental health teams has also been suggested as a positive strategy to promote student well-being and strengthen initiatives addressing student mental health needs (Erbacher et al., 2015). It is also important that the ratio of students to psychologists or school counselors is not too high. The American School Counselor Association recommends one counsellor for every 250 students (American School Counselor Association, 2025). Interagency collaboration in suicide prevention is also relevant, as it may save lives (Hedman, 2023), which involves the collaboration between schools and external mental health services, emergency services, municipal entities, etc.

The literature also supports routine screening and early identification of at-risk students (Husky et al., 2011) and highlights the importance of creating a safe and supportive school climate as another critical institutional action (Obeidat et al., 2024). Furthermore, having a postvention plan in place is vital for schools to respond appropriately following a suicide or suicide attempt (American Foundation for Suicide Prevention & Suicide Prevention Resource Center, 2018). Finally, family and community engagement are essential to effective suicide prevention. Hosting awareness events, providing parent training on mental health issues, and improving referral systems are key strategies for fostering a supportive community around students (Singer et al., 2019).

This study has potential practical implications for schools in Catalonia, highlighting the critical importance of reevaluating and revitalizing suicide prevention strategies. By identifying deficiencies in existing guidelines and protocols, this study not only underlines the need for adjustments in their implementation, but also urges public policies to adopt a more participatory and dynamic approach to suicide prevention. It is essential to develop a framework that not only distributes resources, but also ensures that educational staff are adequately trained and supported to manage this growing mental health crisis. Our findings reveal variability in the perception and effectiveness of suicide prevention resources between schools that have handled direct cases, and those that have not, highlighting a disparity that cannot be ignored. Therefore, our results may elucidate the implementation of educational policies focused on suicide prevention among the youth.

This study had a relatively low response rate of 5.25 % (282 out of 5,467 schools), which represents a key limitation. As previously explained, contextual factors may help explain this outcome. The topic of suicide prevention in educational settings is inherently sensitive. Therefore, potential participants may have been hesitant to engage in this study due to concerns about stigma, reputational risk, or emotional discomfort with this topic −particularly in cases where schools had previously experienced suicide-related incidents. Also, school staff often face substantial administrative and pedagogical workloads, which may limit their capacity to participate in voluntary research activities. However, as explained above, the sample includes a broadly representative distribution of public and private schools in Catalonia and a high proportion of respondents in leadership roles. We believe that this increases the relevance and credibility of the findings and provides valuable insights. However, the results should be interpreted with caution, especially when generalizing to the whole population of schools in the region, as there may be some non-response bias.

In addition to the response rate, the generalizability of the findings may be limited by cultural, structural and policy specific characteristics unique to Catalonia. The region has its own education system, which, while aligned with wider Spanish education policy, operates with a degree of autonomy. This includes specific regional guidelines on suicide prevention, locally managed teacher training structures and different governance models within schools. Cultural norms around mental health and suicide may also differ from those in other regions or countries, potentially influencing both the willingness to engage with suicide prevention protocols and the way in which such protocols are implemented in practice. Furthermore, the organizational culture in Catalan schools − characterized by varying degrees of openness, decentralization and collaboration − may not be directly comparable to systems with more centralized or differently structured education systems. As such, the findings of this study should be interpreted within the socio-political and educational context of Catalonia, and caution should be exercised when attempting to transfer conclusions to other national or international settings.

Another limitation to consider is the potential response bias associated with the use of a self-report instrument, such as social desirability or inaccuracies in recall. For this reason, further studies are needed on this issue, for example using a triangulation strategy with interviews with both students and teachers in addition to the type of self-report data used in the current study. However, it should be noted that participants were guaranteed anonymity, which tends to reduce social desirability bias (e.g. Joinson, 1999). Despite the limitations of this study, we believe that the results provide valuable insights that should be considered in order to improve suicide prevention in schools in the Catalan context.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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