

The forever decision: a qualitative study among survivors of a suicide attempt



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Summary

Background Suicide attempts have a profound emotional impact on both individuals and society as a whole. This qualitative study delves into three key aspects: 1) the progression through the suicidal process, 2) the influential factors facilitating the transition from ideation to attempt using the volitional moderators within the integrated motivational-volitional (IMV) model, and 3) preventive strategies impeding this transition from ideation to attempt.

Methods Between October 1, 2022 and March 7, 2023 we interviewed 27 adults (23 women, four men, mean age 33 years) who attempted suicide within the past 12 months. Participants were recruited through social media and in collaboration with several mental health institutions in the Netherlands. The participants were initially screened and interviewed based on the Pathway to Suicidal Actions Interview. Analysis was performed employing the constant comparative method.

Findings Despite the heterogeneity of the suicidal process, suicidal thoughts predominately emerged during adolescence ($Mdn = 15$, $M = 17.8$). In most participants, planning and preparatory actions occurred long before the attempt, with a median of six years prior to the attempt for the selection of the method. All volitional moderators were observed, although pain sensitivity in particular varied among participants. Access to lethal means and planning emerged as important moderators in the suicidal process. Asking the survivors what could have helped to prevent their attempts, most participants mentioned that they felt their suicidality was not taken seriously enough.

Interpretation We discussed the significance of planning in the suicidal process, challenges in conceptualizing planning and impulsivity, and individual differences in pain sensitivity. Based on the findings, we underscore the critical need for restricting access to means, giving greater consideration to preparatory actions within the suicidal process, and fostering open dialogues about suicidality.

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Keywords: Suicide attempt; Suicidality; Suicide prevention; Risk factors; Protective factors

Introduction

Worldwide, more than 700,000 people die by suicide every year, while the prevalence of suicide attempts is estimated to be 20 times higher.¹ Although suicide

attempts take an immense emotional toll on individuals, families, and communities, the scientific evidence on the process leading up to a suicide attempt is limited. The available theoretical models describe the suicidal

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Translation: For the Dutch translation of the abstract see [Supplementary Materials](#) section.

Research in context

Evidence before this study

We conducted a comprehensive search on Google Scholar, PubMed, and Web of Science from January 1, 2010, to September 1, 2023, using keywords such as 'suicide,' 'suicidal process,' 'suicide survivors', and 'qualitative study'. Our aim was to identify publications investigating the suicidal process among survivors. While we found a few qualitative studies focusing on the reasons for suicide attempts within specific subgroups, only one existing qualitative study offered a detailed exploration of the suicidal process leading up to the attempt. The method of this study is largely duplicated in present study with the addition of testing the presence of volitional moderators.

Added value of this study

Our in-depth interviews with survivors provide fine-grained insights into the process leading up to their recent suicide attempt. Unsurprisingly, the suicidal process was highly heterogeneous, with common trends, such as the emergence of initial suicidal thoughts during adolescence and the

occurrence of preparatory actions years in advance of the attempt. We observed variations in the suicidal process based on the chosen method, confirming the presence of most volitional moderators outlined in influential theoretical models about the suicidal process. This study provide a more detailed description on how these factors contribute to suicidal behaviour, offering new options for preventing the transition from suicidal thoughts to action.

Implications of all the available evidence

Taken together the available evidence underscores that there is ample opportunity to intervene in the suicidal process because it often spans years. The identified lack of open conversations about the desire to die in the survivors' surroundings highlights untapped potential for suicide prevention. If we are able to improve our societal ability to openly and meaningfully discuss death wishes, we may stop the process leading up to suicide. More specifically, asking about practical preparations may be a gateway to a meaningful conversation about alternatives to suicide.

process in so-called 'ideation-to-action models', in which suicidal ideation and a suicide attempt are two, almost separate, processes, each with their own predictors and explanations.²⁻⁴ These models have been empirically tested and improved our understanding of the suicidal process.^{5,6} However, there has been a paucity of qualitative research, yielding real-life experiences of how, why, and when people make the transition from suicidal ideation to an attempt. Also, little is known about how people plan and prepare their attempts and how and when these preparatory actions take place within the suicidal process. Knowledge about these aspects can be crucial for suicide prevention.

The integrated motivational-volitional (IMV; Fig. 1) model of suicidal behaviour is the most specific in the description of factors that distinguish people who experience suicidal ideations from people who act on their thoughts.⁷ According to the IMV model, the following eight factors can be vital for the transition from ideation to enactment: access to lethal means, planning for an attempt, exposure to suicide, impulsivity, physical pain, fearlessness about death, mental imagery of the attempt, and past suicidal behaviour.⁷ Some of these so-called volitional moderators are firmly backed by empirical research, such as past suicidal behaviour,^{8,9} whereas other factors, such as impulsivity, are moderately substantiated in empirical work¹⁰ or merely hypothesised (mental imagery). Although evidence is growing, there are few studies that have examined moderators in qualitative studies to test if the theory fits real-life experiences of people who attempted suicide.¹¹⁻¹³

Using the narrative accounts of people who have been through the suicidal process that involved an

attempt may enrich the empirical knowledge and enhance the visibility and understanding of the process behind such a decision, including important themes and details that are involved in the planning and preparation of an attempt.¹⁴ The few studies conducted among suicide attempt survivors have shown valuable results; however, these studies are mostly focused on the reasons for the attempt in specific groups, such as adolescents, elderly, or men.^{12,15-18} Also, to our best knowledge there are no qualitative studies of suicide attempt survivors that explores the role of volitional moderators in the suicidal process. Therefore, the present study aims to provide fine-grained insights into the suicidal process of people who recently attempted suicide, by examining the following aspects.

- 1) How and when people move through the suicidal process in terms of planning the different steps prior to the attempt.
- 2) How factors operate that promote the transition from ideation to attempt using the volitional moderators in the IMV model as a framework.
- 3) Prevention options that might hinder the transition from suicidal ideation to attempt.

Methods

Study design and participants

The COREQ-guidelines were used to design and report this study.¹⁹ The interviewers, first and third author (KH PhD worked as a researcher at 113 Suicide Prevention and had five years clinical experience and IB MSc worked as junior researcher at 113 Suicide Prevention

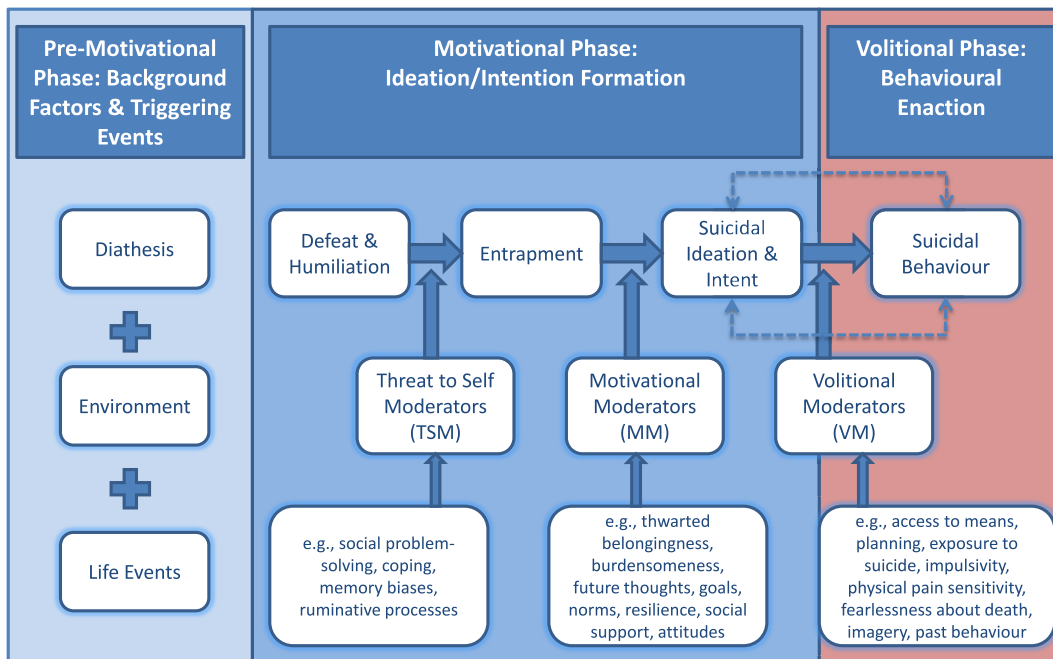


Fig. 1: The Integrated Motivational-Volitional (IMV) model of suicide behaviour. This is a figure of the theoretical model we referred to in the manuscript. We received the image from the original author, Rory O'Connor.

and as psychologist in a psychologist practice, both female) had a clinical degree in psychology, were trained in trauma-sensitive working, and were fully aware of the sensitivity of this topic for participants. A relationship between the interviewers and participants was established prior to the interview through a phone call during which the respondents were also informed about the aims of the study. No information was given about the researchers.

Between October 1, 2022 and March 7, 2023 participants were initially recruited through social media channels of an online national suicide prevention platform, as well as four mental healthcare organizations (Sumona, Reinier van Arkel, GGZ Centraal, and 113 Suicide Prevention) in the Netherlands. Participants were selected by convenience sampling. Eligibility criteria for participation included having attempted suicide at least once within the past 12 months and being at least 18 years of age. Individuals who were experiencing severe psychiatric complaints at the time of the interview, such as acute suicidality or psychotic symptoms, were excluded from participation due to concerns about their well-being. In that case, we promptly informed the involved (general) practitioner.

Screening

After we obtained informed consent, the participants were screened by the researchers during a 20-min telephone call on the inclusion and exclusion criteria.

During this call, we gained more in-depth information about the history of suicidal ideation, self-injury, and suicidal actions. The selected questions were as follows: “At what age did your suicidal thoughts start?” “Have you ever started preparing an attempt but pulled back at the last moment?” We identified a suicide attempt if the person (in their perspective) engaged in a potentially harmful or lethal situation with the intention of dying.²⁰ The screening also included information about their current psychological well-being (e.g., “Are you familiar with psychotic complaints, for example hearing voices without an external origin?”). Subsequently, the researcher planned an interview (see Fig. 2 for participant flow).

Interview. Participants assessed their psychological well-being using a Mental Health Quality of Life Visual Analogue Scale (MHQoL-VAS) ranging from 1 (worst imaginable psychological well-being) to 10 (best imaginable psychological well-being) immediately before and after the interview.²¹ Using this well-being score, the interviewer discussed their ability to participate in the interview with the participant, especially in the event of a low score in well-being. Additionally, the interviewer discussed the participants’ potential needs for aftercare in case of a lower score in well-being after the interview. If necessary, the interviewer informed the participants’ GP, psychologist, or designated contact person to ensure appropriate follow-up and support. Prior to the

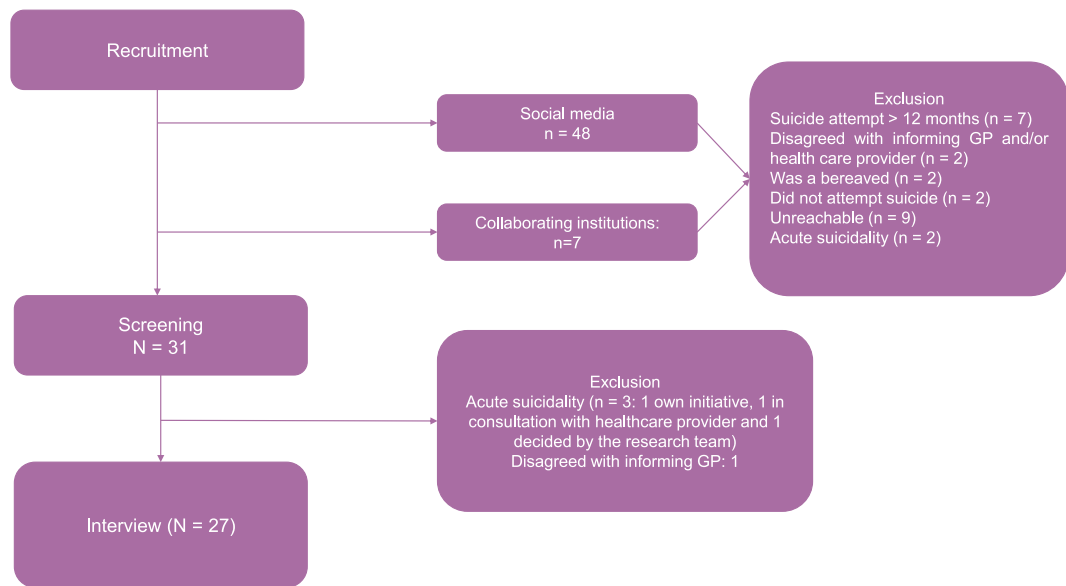


Fig. 2: Participant flow. This figure describes How many participants were assigned, screened, and included/excluded in the study.

interview, the participants filled out a 28-item questionnaire with demographic variables, such as gender, as well as mental health related variables including psychiatric diagnoses, family history of suicide, depressive symptoms (Patient Health Questionnaire 9),²² and general mental health (Mental Health Continuum Short Form).²³

The interview guide was based on the Pathway to Suicidal Actions Interview (PSAI).¹¹ The PSAI was developed to assess all the steps that people take in the suicidal process and consists of an introduction interview and a follow-up interview. We used the introduction interview in the telephonic screening and follow-up interview as the basis of the interview guide. The interview guide was translated into Dutch, and we added several questions on prevention and aftercare, such as the following: “Did anybody know that you were preparing an attempt?” “Did you experience any barriers during the preparations of your attempt?” “How did you experience the aftercare?” (see [Supplementary File S1](#)). The translation and adaptation process was carried out by the first three authors (KH, SM, and IvdB). Additionally, two experts (fourth and last author; DvB and SvV) in the field and the research team of 113 Suicide Prevention, which included colleagues with lived experience of suicidality, reviewed and provided input on the interview.

The interviews were conducted at the participants’ homes, or if they preferred, at a neutral place, such as the psychiatric clinic or a conference room in a hotel. To ensure safety during home visits, a coworker accompanied the interviewer. The length of the

interviews varied from 45 to 90 min ($M = 69.2$ min). All interviews were conducted in Dutch, and audio recordings and field notes were made. After the interview, participants were presented with a €25 gift voucher as a token of appreciation for their time. In agreement with the participant, general practitioners and mental health care providers were informed about the interview before it took place. None of the practitioners expressed any reservations against the participation of their patients in the study. To address potential distress during or after the interview, a clinical psychologist working at 113 Suicide Prevention was available to speak with interviewees. Our plan was to arrange telephone consultations if needed; however, there was no requirement for such assessments during the study. For additional support, 113 Suicide Prevention, offering 24/7 support for suicidal individuals by telephone or chat, was accessible to participants. Also, the interviewer called three weeks after the interview to inquire about their well-being. In the case of Adverse Events, we consulted the last author (SvV).

Statistical analysis

Data were analysed using the constant comparative method.^{24,25} Three researchers coded the interviews using Atlas.ti by deductive coding to identify themes that were part of our interview instrument, such as “method motivation” or “preparation unrelated to method.” In weekly meetings, the coding was then discussed to ensure the mutual understanding of each code, and inductive coding was used to add missing codes or

themes. All coded interviews were cross-checked by another researcher to increase the validity, and conflicting codes were discussed until consensus was reached. No repeat interviews were carried out, the transcripts and findings were not returned to the participants for comments. The final interviews did not yield significant new codes, leading to consensus within the project group that saturation was reached.

Ethics

Ethical approval was obtained by the medical ethics committee of Amsterdam UMC (University Medical Centers) (NL80293.029.22).

Role of the funding source

The funders of the study had no role in study design, data collection, data analysis, data interpretation, or writing of the article. Authors affiliated with 113 Suicide Prevention at the time of the analysis, including KH, SM, IvdB, DvB, RG, and SvV, had full access to the data. DvB and KS did not have access to the data, they were involved in the project for clinical guidance. All authors accept responsibility for the decision to submit for publication.

Results

We conducted 27 interviews from October 1, 2022 to March 7, 2023 (see [Table 1](#) for sample information). The majority of the participants had a psychiatric diagnosis ($n = 22$). The most prevalent diagnoses were post-traumatic stress disorder ($n = 9$), mood disorder ($n = 7$), and personality disorder ($n = 7$). Additionally, 13 participants reported comorbidity involving various combinations of these psychiatric diagnoses. Participants indicated no alcohol and/or drugs addiction. There was an unequal gender representation in the study with 23 women and four men.

According to the MHQoL-VAS, eight people reported a decrease in their psychological well-being, four participants reported an increase, and 15 participants reported no difference in their well-being after the interview ($M_{\text{score pre-interview}} = 5.6$, $M_{\text{score post-interview}} = 5.6$). In addition, as part of the study's aftercare procedures, each participant was contacted three weeks after the interview, none of the participants required additional aftercare. During the follow-up period, two participants informed us about a recent suicide attempt in which participation had no relevant role and one participant declared that her symptoms worsened. We registered these attempts as adverse events and informed their therapist.

The suicidal process

[Fig. 3](#) shows the sequence and timing of the following chronological steps in the suicidal process: suicidal ideations, mulling (considering whether to attempt

suicide or not), making a decision, carrying out preparatory actions, and making an attempt. We found that the individual pathways were very heterogeneous (see [Supplementary File S2](#)). The most frequent sequence observed among participants was thinking about suicide, mulling over, making a decision to attempt suicide, preparing, and finally attempting suicide. This sequence was followed by another pattern in which the participants took preparatory actions before reaching the decision phase.

Preparatory actions mentioned by participants included writing a goodbye letter or writing down wishes for their funeral. The majority of participants carried out at least one preparatory action, with more than half of them performing such actions long before the attempt, sometimes even years in advance. These were, for example, writing down passwords for relatives to find, being reluctant to plan vacations with friends, and writing goodbye letters. Regardless of the timing of suicidal ideations at their recent attempt, all participants had experienced suicidal ideations previously in their life; the onset was early in life, mostly in adolescence ($Mdn = 15$, $M_{age} = 17.8$).

Evaluation of volitional moderators

Access to means

Access to medication appeared to be an easily accessible method. A few participants who chose overdosing as a method needed time to save their medication. Others explained that they had medication left from a period in which they had to switch to different medications, took advantage of an error in the medication issuance, or received medication for months in advance. Participants who had chosen the railway for their attempt were aware of suitable places along the railway, such as a shielded place with the absence of fences, bystanders, and cameras (See [Table 2](#), quote 1).

Many participants indicated that the availability of the method gave them a sense of peace, such as carrying a knife, keeping medication in reserve, or knowing the train schedules by heart. Simultaneously, some admitted that this sense of peace might be an illusion because the availability also lowered the threshold to use the means. In most cases, preparations were made in advance of the attempt, either by searching for a suitable place along the railway or by buying necessities (e.g., knife; [Table 2](#), quote 2).

Planning

Planning the attempt started mostly by choosing a method. Except for three participants, most participants considered the method years prior, with a median onset of six years before the attempt. Methods were considered based on several elements, most mentioned the effectiveness of the method (lethality), the pain intensity (absent or short), and the violence of the method, which was mentioned as important for their bereaved

Characteristic	Number of participants (N = 27)
Age M (range)	33 (21–63)
Sex n	
Woman	23
Man	4
Number of participants with past suicidal behaviours n	
Self-harm ^a	21
Aborted attempts	8
Interrupted attempts	16
Serious attempts	20
Participants with >1 suicide attempt (%)	23 (85.5%)
Age of onset suicidal ideation M (SD)	17.8 (8)
Living situation n	
Alone	16
With partner	5
Other	6
Other demographical variables n	
Having children	4
Working	15
Studying	5
Receiving psychological care at the time of the attempt	25
Medicine use for psychiatric condition	23
Religious	4
Other sexual orientation than heterosexual	7
Method recent attempt n	
Overdosing	11
Railway	7
Suffocation (e.g., gas)	3
Cut wrist	2
Other (insulin, hanging, jumping, drowning)	4

Note. 25 participants have experienced more than one category of suicidal behaviours in the past. ^aSelf-harm is defined as 'a non-fatal act in which a person harms himself or herself, and intent to die is either absent or not accessible to observation.'²⁶

Table 1: Background information study sample.

(humanity). In the process of considering which method to choose for their most recent attempt, the railway was mentioned most frequently because of its perceived effectiveness and relative minor effort it would take. Those participants who had chosen the railway for their attempt explained that they thought about the consequences for the train driver, but at the moment of the attempt, these thoughts were overshadowed by their own suffering and feeling that there was no other option (Table 2, quote 3).

Most participants searched the internet for information about methods such as dosage or lethality. Scientific articles, medical guidelines, incident reports, forums, and personal blogs with experience stories were screened. Several participants told us that healthcare providers unintentionally suggested a specific dosage, medication, or combine alcohol with medication (Table 2, quote 4).

The majority of the attempts were planned in the evening. Several participants described that suicidal thoughts and feelings accumulated over the day and climaxed in the evening. Others mentioned that nobody missed them during the night, so the chances of an interrupted attempt were minimal. The place had to meet certain conditions; the most important was privacy, with a low chance of being seen or interrupted. Therefore, half of the participants chose their homes. The other half had to travel, either because of the method (railway, bridge, or water) or privacy. For some of the participants, their (approaching) birthday, the date of a prior attempt, or the date/time a loved one died was an important trigger for planning an attempt, often because of the emotional charge of the date. Some participants explained that their birthday was an opportunity to say goodbye to their loved ones without arousing suspicion.

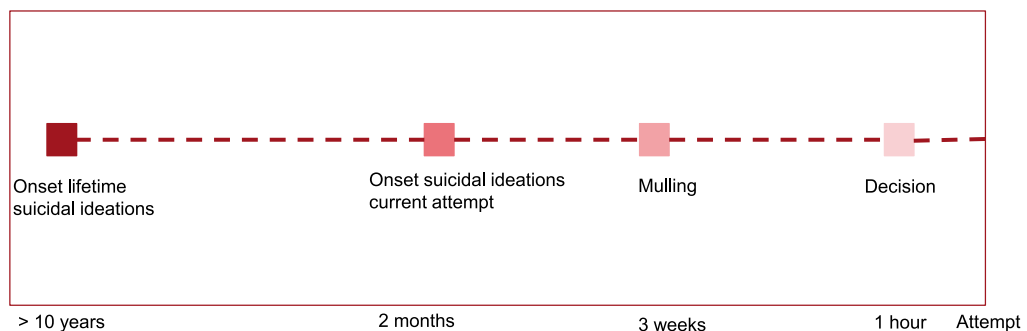


Fig. 3: Median of each pathway step in the suicidal process. This figure describes the participants' median timing of each pathway step in the suicidal process. The labels on the X as describe the median values. The labels in the figure describe each pathway step.

- 1 "I'm still very sure of that place, but I'm not much of a climber, and there's a fence, so that stops me. So I do think I consciously choose that place, that if I really want to, I'll climb the fence, you know. But apparently, when I arrive at this spot, doubt creeps in, and I often decide to remain where I am ... You have to take off your shoes to climb the fence and really make an effort." Woman, 27 years old—72225
- 2 "I had so many appointments that I couldn't afford to miss. However, throughout, I took that jar with pills with me, as a precautionary measure for moment when I felt overwhelmed and believed it could offer a way out. ... Now that I don't have access to that medication, I carry a knife with me. It is placed in the car right now because we visited an event with the children, and I knew that the security would check my bag." Woman, 39 years old—69,018
- 3 "I would hate to traumatised someone else because I am living with a traumatised past myself. However, in that particular moment, I was done with the situation. While I am typically considerate of others, the absence of anyone that took care of me left me feeling isolated. . In that moment, nothing else held significance. In hindsight, I feel very bad about that." Woman 47 years old—65,910
- 4 "In previous attempts, I did not drink alcohol next to the medication. However, doctors consistently inquire about alcohol intake. . Therefore, in my latest attempt, I contemplated that doing it 'right' involved combining alcohol with the pills" Woman, 34 years old—70,622
- 5 "My granddad died by suicide, and my mother did many attempts and eventually died by suicide. My son made many attempts and recently my grandchild too ... I don't believe that I am the only one in whom suicidality carries from generation to generation." Woman, 47 years old—65,910
- 6 A participant who planned her attempt a long time before but made the decision an hour prior to the attempt after a disappointing outcome of her intelligence test said the following: "The plan was ready for a long time. Like, if necessary, then I always have that plan, and then, I can always ... The chosen location was a deliberate decision, thoroughly considered. . So I think that's all been thought about. And at that moment, I didn't have to think about it anymore because everything was already well thought out. So is it impulsive or not? Perhaps, the crucial aspect lies in the timing of that moment." Woman, 47 years old—77,336
- 7 "The absence of pain or blood was very important to me; I did not want to feel pain or lie in a pool of blood. I didn't feel like bothering people, like social workers, family, or anyone else. It was hard enough already." Man, 47 years old—74,430
- 8 "The fear of not getting that rest. What would happen? Then, it would all be for nothing. And would I still feel something? No one can explain anything, and that, in essence, is the source of my fear—the inability to comprehend the aftermath" Woman, 23 years old—67,514
- 9 "Yes, I had an image in my mind because of a girl I knew who used the same method. Although I did not witness it personally, being a close friend allowed me access to the details. I know she was discovered in a serene state, just sitting in the bathroom with her favorite stuffed animal by her side. I have a peaceful image about and I projected it on myself, imagining that I, too, would be found in such a peaceful manner." Woman, 36 years old—64,808
- 10 "Discuss it openly. Please, communicate. Sometimes, people wonder, 'What should I ask?' I suggest being straightforward and asking, 'Why do you feel this way? What's the underlying reason?' Then, explore together to understand if that's genuinely the core issue, examining the shades of gray. Be supportive and don't leave that person alone; it's crucial." Woman, 36 years—76,034
- 11 "In the midst of that state, I was completely convinced that this was the path to follow. However, upon emerging from it, I came to realise that it wasn't the right way. This realization came while I was seated beside the railway during a phone conversation with my mentor." Woman, 22 years—66,612
- 12 "An attempt like that just shatters you psychologically. Afterwards, you are left utterly drained. There's this bewildering sense of, 'What the hell just happened?' And a profound fear lingers within, questioning how I reached this point. I was almost gone." Woman, 25 years—66,011

Table 2: Quotations of participants.

Exposure to suicide or suicidal behaviour

More than half of the participants were exposed to suicidality in their surroundings. Specifically, 14 participants knew friends who had made suicide attempts, 11 participants knew friends who died by suicide, nine participants had family members who had made suicide attempts, and two participants had family members who had died by suicide. Furthermore, approximately one-fourth of them reported being exposed and influenced to the idea of the suicide method within their environment. This exposure involved encountering the same method that was used by others (offline interactions) in their surroundings who had engaged in fatal suicidal behaviour (Table 2, quote 5).

Impulsivity

About a quarter of the participants went through the steps in the suicidal pathway (suicidal ideation, mulling, decision, and attempt) within a week, and two participants did so within 30 min. When stratified by the most frequently used methods (railway and overdoses), we found a very different pathway (Fig. 4). In the group that attempted suicide by overdoses, there was a relatively long period of ideations and mulling and a very short window between the decision and attempt. In the group

that attempted suicide on the railway, there was a rapid development of suicidal ideations and mulling and a larger time gap between the decision and the attempt (Table 2, quote 6).

Physical pain sensitivity/endurance

Most participants in our study explained that they searched for a painless method to attempt suicide. The participants who used overdosing or suffocation searched for a painless, calm, and humane method to attempt suicide, anticipating that these approaches would better align with these criteria compared to other methods (Table 2, quote 7). Those participants who attempted suicide on the railway explained that they were not afraid of the pain because they expected it would happen in an instant. Two participants attempted suicide by cutting their wrist and had very different pain experiences, i.e., relaxation because of the pain experience.

Fearlessness about death

Most of the participants expected to find peace and were not afraid to die. The idea of being freed from their negative and intrusive thoughts, the constant battle with life, and the expected stillness and peace seemed to take away any fear. A minority was afraid of the unknown or

possibility that their problems would not stop after they died (n = 6; Table 2, quote 8).

Mental imagery

Half of the participants mentioned mental images in which they rehearsed the method or scenario in their mind. This process included images of the attempt itself, the pain they might feel, the effects on others, or the moments after they would die, such as their funeral or how loved ones would find them. A few participants had an (online) image in their minds of someone who had died by the same method and projected this image on themselves (Table 2, quote 9).

Prevention options

A minority of the participants (n = 3) experienced barriers in preparing for their attempt, such as the unexpected arrival of people, which made them decide to postpone the attempt. However, most participants experienced the preparations as easier than expected. It was striking in some participants (n = 8) that thoughts about the consequences of their death for their family, especially nephews and nieces, raised the threshold. Their thoughts included the despair of not seeing them grow up, the difficulty for the bereaved to explain the reason for their death, and the feeling of failure as a role model. The presence and need to care for pets also raised the threshold.

Asking the survivors what could have potentially prevented their attempts, most participants mentioned that they felt they were not taken seriously enough in

their suicidality by their care providers. The participants believed that a more direct approach, such as directly asking about their suicidal thoughts, questioning their state of mind, acknowledging their despair, and providing a safe space for discussing their feelings and thoughts related to their desire to die, could have been helpful (Table 2, quote 11).

Most attempts were not fatal because either the participant called for help (emergency services or family/friend) or there was an intervention at the right time by someone in the environment. Other attempts were not fatal because the plan did not work out as hoped, or the participant decided not to pursue the attempt. Some participants described a tunnel vision leading them to the decision to attempt suicide, in combination with being in a state of daze. A few explained that this feeling was broken by external stimuli, such as the confrontation of a passing train, the vibration of a smart watch as a friend called, or the unexpected presence of other people.

A majority of the participants mentioned complex feelings after the suicide attempt, often involving a combination of failure and shame. During the interviews, some participants expressed concerns about potential judgement from the interviewers. While many participants received aftercare, there were just a few cases in which, in the experience of the participant, the therapist provided a sympathetic ear toward the suicidal process leading up to the attempt. In post-attempt therapy sessions, the focus was mainly on safety management. Some of the participants believed that a

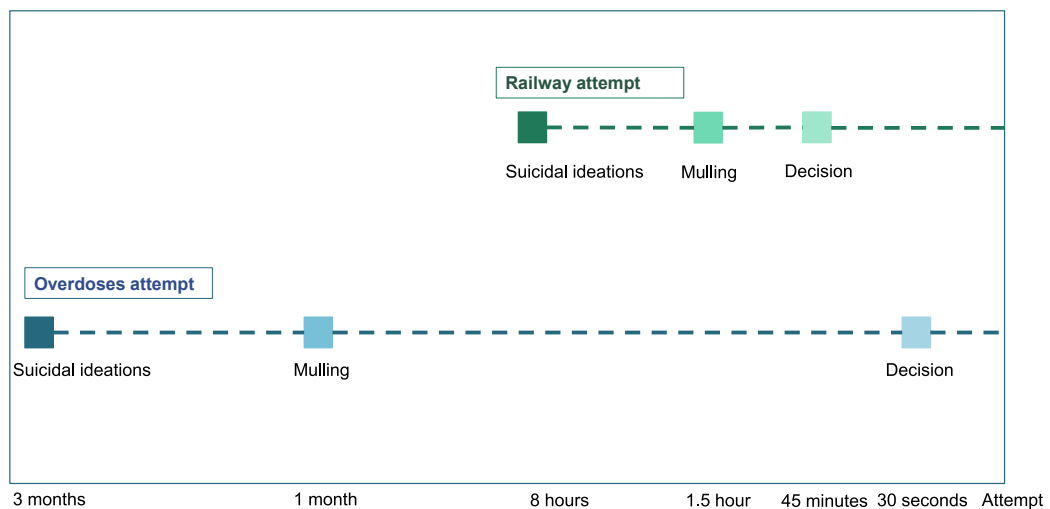


Fig. 4: Median time of each pathway step in the suicidal process according to the method used. This figure describes the participants’ median timing of each pathway step in the suicidal process divided into two participant groups: participants that attempted suicide on the railway (upper line) and participants that attempted suicide by overdoses (bottom line). The labels on the X as describe the median values. The labels in the figure describe each pathway step.

detailed analysis of the attempt would be beneficial in preventing future occurrences.

Discussion

In this article, we explored the suicidal process leading up to a suicide attempt, including important steps, barriers, and facilitators, resulting in several important findings. Firstly, despite the heterogeneity of the suicidal process, we observed that suicidal thoughts predominantly emerged during adolescence. Preparatory actions played a crucial role, occurring well in advance of the actual attempt. Secondly, most of the volitional moderators outlined in the IMV model were prominently present, whereby the interviews provided more details about the working mechanism of the moderators. Planning emerged as a substantial component, with individuals taking around six years to select a suicide method and selected preferred locations beforehand. Additionally, many participants were influenced in their method of choice by experiences of suicide in their environment, online stories or symbolic date. Moreover, defining impulsivity proved challenging. Those who attempted suicide on the railway completed the steps in the suicidal process within 48 h, indicating a comparatively more impulsive process than individuals who chose overdose as their method. Thirdly, asking suicide survivors to factors that (could) have prevented their attempt yielded several interesting findings such as the critical importance of fostering open conversations about suicidality. We discovered the significant role of family, specifically the importance of care and responsibility for young and vulnerable family members. Furthermore, we found that the experienced tunnel vision prior to the attempt could be disrupted by unexpected sensory stimuli, such as a phone call or the presence of people. Based on our research findings we will delve into the clinical implications and present seven practical recommendations (see [Panel 1](#)).

The current results were consistent in some ways with Millner et al. (2017). Both studies found that the onset of suicidal ideations and selection of the method occurred years prior to the attempt. The heterogeneity of the suicidal process was also consistent. However, there were notable differences in the timing of the suicidal process itself. In our study, the median onset for continuous suicidal ideations was two months prior to the attempt, while it was two weeks in Millner et al.'s study (2017). This discrepancy could be attributed to differences in population. Millner et al. (2017) interviewed 30 patients between 18 and 35 years of age in a psychiatric inpatient unit who reported a suicide attempt in the prior two weeks. In contrast, most participants in our study voluntarily registered themselves after a social media appeal, which suggests that they were more open to discussing suicidality and had a desire to contribute to prevention efforts.

Moreover, our sample exhibits similarities with identified risk factors for repeated suicide attempts, including being female, younger age, heightened severity of psychiatric symptoms, and comorbidity.^{29,30} Most participants had experienced suicidal symptoms for years, and 23 of the 27 participants reported multiple suicide attempts in their past. The suicidal process operated cyclically, often persisting for years as participants found themselves trapped in this loop. While not directly within the purview of this study, it was observed that many participants harbor an expectation of eventual suicide or continue to anticipate future attempts. This aligns with findings from a network analysis, which highlighted an active desire to attempt as the most central symptom in repeat attempters.³¹ Notably, our study underscores the significance of planning in this cyclical process. Participants expressed that having a plan provided a sense of control over their suicidality, offering a feeling of safety and aiding in coping with acute emotional distress. However, the active desire or expectancy associated with planning can exacerbate the difficulty of breaking free from the cycle of suicidality. To interrupt this process, safety planning is an effective intervention in reducing suicidal behaviour and is strongly recommended in clinical practice.^{7,32} Still, future research should delve deeper into the concept of planning as we anticipate that the planning of a suicide attempt holds broader implications than currently depicted in the IMV model.

Additionally, more attention is needed for the conceptualization of both planning and impulsivity. Some participants in our study called their attempt impulsive but planned, highlighting a complex interplay between a period of mulling over their thoughts and preparations. Despite the planning involved, the decision to attempt suicide was often abrupt and triggered by an adverse event, such as an argument with their partner. On the other hand, there were participants that completed the steps in the suicidal process in a very short period. However, they did not always describe their attempt as impulsive, often because of preparatory actions earlier in life, or an earlier attempt with the same method, whereby the preparatory steps were sometimes executed more than once (e.g., standing along the railway). This is in line with earlier research showing that there was no association between the amount of preparation prior to an attempt and the extent to which the participants described their attempt as impulsively driven.³³ Still, it is important to note that this study examined impulsivity as a characteristic of the suicide attempts themselves rather than the common exploration of impulsivity as a personality trait, such as in the IMV model. Consequently, we could only relate the findings to the degree of objective signs of planning and the amount of time spent between the decision and the actual attempt.³⁴ However, the majority of participants had made repeated suicide attempts, which was

Panel 1: Practical implications

1. The results have underscored the importance of implementing barriers, such as placing fences and cameras at railways and restriction in medication, to prohibit suicide attempts.
2. Many participants experienced a state of heightened focus and narrowed consciousness both leading up to and during their attempts. During this state there was no room for concern about significant others, reaching a point of no return. The revelation that unexpected stimuli have the potential to break through this state is very informative for prevention strategies. For instance, the use of unexpected sensory stimuli, such as colored light or sound effects, at suicide risk places like railway areas, has shown promise in breaking through the emotional daze which suicidal people are likely to experience prior to an attempt.²⁷
3. Therapists should proactively inquire about the means that suicidal patients may have access to, not only during a suicidal crisis but also during the intake process, as preparations (such as choice of suicide method) can occur years prior to an attempt.
4. In treatment settings, clinicians could explore certain dates that hold special meaning and be mindful of the possible burden of these dates.
5. The increased threshold to attempt suicide when thinking about (young/vulnerable) family members could inform safety management. For instance, placing a picture of the family member in a prominent location may serve as a reminder and deterrent.
6. Given that many individuals prepared an attempt by searching online and offline for a “suitable” method, caution is warranted with the sharing of stories of explicit details of preparatory actions for an attempt of people with lived experiences. It is crucial to apply evidence based media guidelines on suicide in online platforms (e.g., moderation of social platforms or forums, taking explicit videos offline²⁸).
7. Being aware that the majority of suicide attempts are planned in the evening could be valuable information for (crisis) services, enabling them to enhance their staffing during those hours.

previously found to be related to impulsivity as a personality trait.³⁴ To conclude, our findings align with reviews emphasizing the complexity of impulsivity as predictor for suicide risk and the need for a more person-centred approach.^{10,34}

With respect to O’Connor’s IMV model, the data show that some moderators (access to means, planning, fearlessness of death, and exposure to suicide) may have a more prominent place in the suicidal process than others (mental imagery and pain sensitivity). Strikingly, an increased physical pain endurance was even mentioned by a minority of the participants. In our sample, pain sensitivity was mainly about a wish for painlessness, which was an important motivator in their choice of the method. While our study did not directly measure participants’ pain sensitivity, existing literature aligns with our observations. It is often assumed that individuals with lower pain sensitivity are more inclined to attempt suicide, as evidenced by studies that have found increased pain tolerance among individuals engaging in self-harm.^{35,36} However, the evidence regarding pain sensitivity and self-harm is not consistent. For instance, one study found increased pain sensitivity in participants who engaged in self-harm.³⁷ Although the participant numbers were too small to make statements on the subgroup level, we did observe differences in pain sensitivity between participants who chose self-harm methods (such as wrist cutting) compared to those who chose other methods. These differences warrant a nuanced understanding of individual experiences.

Lastly, we underline the importance of talking about suicidality, a theme that was unanimously mentioned by the participants in this study. They expressed a lack of

open conversations about their desire to die with care providers, emphasizing the value of having someone who listens, which helped alleviate their loneliness. This finding supports the evidence from a recent study showing that the main expectations of help-seekers who called Lifeline, a national 24-h crisis support and suicide prevention service in Australia, were to feel heard and listened to. Strikingly, expectations of help-seekers in suicidal contacts were less likely to be met compared to those in non-suicidal contacts.³⁸ The critical need for clinician training in empathic communication is evident to ensure that individuals seeking help are treated with sensitivity, fostering a sense of support and diminishing feelings of isolation. Consequently, clinicians should prioritise engaging in conversations about suicidality, recognizing these dialogues as opportunities to validate the individuals’ unique experiences before delving into safety management discussions. Moreover, by fostering open and empathic dialogues about suicidality, professionals can better understand their patients’ struggles and provide more effective support in preventing suicide attempts.

The notable overrepresentation of women in our participant sample introduces a potential limitation. Moreover, recruiting a balanced sample within this participant group proved challenging due to the inherent vulnerability and personality traits associated with those who are more or less inclined to participate in research studies. Consequently, the observed sample may not fully capture the diversity within the broader population experiencing suicide attempts. In addition, the unavailability of a validated questionnaire specifically designed for assessing suicidality may impact the precision and reliability of the screening. Lastly, a

limitation arises from the development of the interview guide in which individuals with lived experiences only had a minor role (i.e., involving colleagues with lived experiences). This shortcoming might have influenced the comprehensiveness and relevance of the questions posed to participants.

This study had made significant strides in understanding the suicidal process through the lens of the IMV model. Given the scarcity of qualitative studies exploring real-life experiences, our findings provide valuable insights into this complex phenomenon. Our study highlights the crucial role of access to means, long term preparations in the suicidal process, and the significance of safety planning and active questioning (of preparatory actions) in prevention efforts. The findings hold relevance for clinical research and offer a deeper understanding of the complexities surrounding suicide, paving the way for more targeted prevention strategies. Moreover, it has provided an enhanced focus on people with lived experience of suicide, shedding light on real-life experiences and capturing empirical data to improve our understanding of suicide.

Contributors

KH and SM co-designed the study. KH and IvdB conducted the interviews. KH, SM, and IvdB accessed and verified the underlying data. KH wrote the first draft of the article. SM supervised every step in this research project. DvB and SvV gave feedback on the interview instrument and both had a consultative function during the qualitative analyses. SvV contributed in discussing the adverse events. All authors (KH, SM, IvdB, DvB, DB, KS, RG, and SvV) contributed to discussion and interpretation of the results, and to the writing of the manuscript. All authors have read and approved the final manuscript. Those affiliated with 113 Suicide Prevention at the time of the analysis, including KH, SM, IvdB, DvB, RG, and SvV, had full access to the data. DvB and KS did not have access to the data, they were involved in the project for clinical guidance. All authors accept responsibility for the decision to submit for publication.

Data sharing statement

The data that support the findings of this study are available from the corresponding author [KH], upon reasonable request.

Declaration of interests

SM received funding from ProRail, Ministry of Health, Welfare and Sports, Youth Care Netherlands, and Zon-MW for research that contributes to suicide prevention. She received honoraria for guest lectures of suicide prevention in youth. KH, IvdB, DvB, DB, KS, RG, and SvV declare that they have no conflicts of interest.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at <https://doi.org/10.1016/j.eclinm.2024.102449>.

References

- World Health Organization. *Suicide*; 2021. Available from: <https://www.who.int/news-room/fact-sheets/detail/suicide>.
- Joiner TE. *Why people die by suicide*. Harvard University Press; 2005.
- Klonsky ED, May AM. The three-step theory (3ST): a new theory of suicide rooted in the "ideation-to-action" framework. *Int J Cognit Ther*. 2015;8(2):114–129.
- O'Connor RC. Towards an integrated motivational–volitional model of suicidal behaviour. *International handbook of suicide prevention. Res Policy Pract*. 2011;1:181–198.
- Wetherall K, Cleare S, Eschle S, et al. Predicting suicidal ideation in a nationally representative sample of young adults: a 12-month prospective study. *Psychol Med*. 2022;52(14):3168–3175. <https://doi.org/10.1017/S0033291720005255>.
- Chu C, Buchman-Schmitt JM, Stanley IH, et al. The interpersonal theory of suicide: a systematic review and meta-analysis of a decade of cross-national research. *Psychol Bull*. 2017;143(12):1313–1345. <https://doi.org/10.1037/bul0000123>.
- O'Connor RC, Kirtley OJ. The integrated motivational–volitional model of suicidal behaviour. *Phil Trans Biol Sci*. 2018;373(1754):20170268.
- Bostwick JM, Pabbati C, Geske JR, McKean AJ. Suicide attempt as a risk factor for completed suicide: even more lethal than we knew. *Am J Psychiatr*. 2016;173(11):1094–1100.
- Mars B, Heron J, Klonsky ED, et al. Predictors of future suicide attempt among adolescents with suicidal thoughts or non-suicidal self-harm: a population-based birth cohort study. *Lancet Psychiatr*. 2019;6(4):327–337.
- Moore FR, Doughty H, Neumann T, McClelland H, Allott C, O'Connor RC. Impulsivity, aggression, and suicidality relationship in adults: a systematic review and meta-analysis. *eClinicalMedicine*. 2022;45.
- Millner AJ, Lee MD, Nock MK. Describing and measuring the pathway to suicide attempts: a preliminary study. *Suicide Life Threatening Behav*. 2017;47(3):353–369.
- Player MJ, Proudfoot J, Fogarty A, et al. What interrupts suicide attempts in men: a qualitative study. *PLoS One*. 2015;10(6):e0128180.
- Taliaferro LA, Almeida J, Aguinaldo LD, McManama O'Brien KH. Function and progression of non-suicidal self-injury and relationship with suicide attempts: a qualitative investigation with an adolescent clinical sample. *Clin Child Psychol Psychiatr*. 2019;24(4):821–830.
- Hawton K. Studying survivors of nearly lethal suicide attempts: an important strategy in suicide research. *Suicide Life Threatening Behav*. 2002;32:76–84.
- Bazrafshan M-R, Sharif F, Molazem Z, Mani A. Exploring the risk factors contributing to suicide attempt among adolescents: a qualitative study. *Iran J Nurs Midwifery Res*. 2016;21(1):93.
- Cavalcante FG, Minayo MC. Qualitative study on suicide attempts and ideations with 60 elderly in Brazil. *Ciência Saúde Coletiva*. 2015;20:1655–1666.
- O'Brien KHM, Nicolopoulos A, Almeida J, Aguinaldo LD, Rosen RK. Why adolescents attempt suicide: a qualitative study of the transition from ideation to action. *Arch Suicide Res*. 2021;25(2):269–286.
- Valdez-Santiago R, Cruz-Bañares AL, Rojas-Carmona A, Arenas-Monreal L. Living conditions of adolescents who have attempted suicide in Mexico. *Int J Environ Res Publ Health*. 2020;17(16):5990.
- Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care*. 2007;19:349–357.
- Posner K, Brown GK, Stanley B, et al. The Columbia–Suicide Severity Rating Scale: initial validity and internal consistency findings from three multisite studies with adolescents and adults. *Am J Psychiatr*. 2011;168(12):1266–1277.
- Van Krugten F, Busschbach J, Versteegh M, Hakkaart-van Roijen L, Brouwer W. The Mental Health Quality of Life Questionnaire (MHQoL): development and first psychometric evaluation of a new measure to assess quality of life in people with mental health problems. *Qual Life Res*. 2021;31:1–11.
- Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. *J Gen Intern Med*. 2001;16(9):606–613.
- Lamers SM, Westerhof GJ, Bohlmeijer ET, ten Klooster PM, Keyes CL. Evaluating the psychometric properties of the mental health continuum-short form (MHC-SF). *J Clin Psychol*. 2011;67(1):99–110.

- 24 Boeije H. A purposeful approach to the constant comparative method in the analysis of qualitative interviews. *Qual Quantity*. 2002;36:391–409.
- 25 Glaser BG, Strauss AL, Strutzel E. The discovery of grounded theory; strategies for qualitative research. *Nurs Res*. 1968;17(4):364.
- 26 De Leo D, Goodfellow B, Silverman M, et al. International study of definitions of English-language terms for suicidal behaviours: a survey exploring preferred terminology. *BMJ Open*. 2021;11:e043409. <https://doi.org/10.1136/bmjopen-2020-043409>.
- 27 Hallewell M, Ryan B, Hughes N, Coad N. Conceptualising innovative lighting interventions for suicide, trespass and risky behaviour on the railway. *Light Res Technol*. 2023;55(1):79–99.
- 28 Pirkis JE, Burgess PM, Francis C, Blood RW, Jolley DJ. The relationship between media reporting of suicide and actual suicide in Australia. *Soc Sci Med*. 2006;62(11):2874–2886.
- 29 Monnin J, Thiernard E, Vandel P, et al. Sociodemographic and psychopathological risk factors in repeated suicide attempts: gender differences in a prospective study. *J Affect Disord*. 2012;136(1-2):35–43.
- 30 Scoliers G, Portzky G, van Heeringen K, Audenaert K. Sociodemographic and psychopathological risk factors for repetition of attempted suicide: a 5-year follow-up study. *Arch Suicide Res*. 2009;13(3):201–213.
- 31 De Beurs DP, Van Borkulo CD, O'Connor RC. Association between suicidal symptoms and repeat suicidal behaviour within a sample of hospital-treated suicide attempters. *BJPsych Open*. 2017;3(3):120–126.
- 32 Nuij C, van Ballegooijen W, De Beurs D, et al. Safety planning-type interventions for suicide prevention: meta-analysis. *Br J Psychiatr*. 2021;219(2):419–426.
- 33 May AM, Klonsky ED. “Impulsive” suicide attempts: what do we really mean? *Personal Disord*. 2016;7(3):293.
- 34 Gvion Y, Apter A. Aggression, impulsivity, and suicide behaviour: a review of the literature. *Arch Suicide Res*. 2011;15(2):93–112.
- 35 Franklin JC, Aaron RV, Arthur MS, Shorkey SP, Prinstein MJ. Nonsuicidal self-injury and diminished pain perception: the role of emotion dysregulation. *Compr Psychiatr*. 2012;53(6):691–700.
- 36 Germain SAS, Hooley JM. Aberrant pain perception in direct and indirect non-suicidal self-injury: an empirical test of Joiner's interpersonal theory. *Compr Psychiatr*. 2013;54(6):694–701.
- 37 Kirtley OJ, O'Connor RC, O'Carroll RE. Hurting inside and out? Emotional and physical pain in self-harm ideation and enactment. *Int J Cognit Ther*. 2015;8(2):156–171.
- 38 O'Riordan M, Ma JS, Mazzer K, et al. Help-seeker expectations and outcomes of a crisis support service: comparison of suicide-related and non-suicide-related contacts to lifeline Australia. *Health Soc Care Community*. 2022;30(6):e4535–e4544.