Differentiation of suicidal behaviour

Remco de Winter, Connie Meijer, Nienke Kool, Marieke de Groot

Introduction

While suicidal behaviour is common, suicide, the 'end-product' of suicidal behaviour, is rare. For example in the Netherlands approximately 400,000 people per year experience suicidal thoughts. There are about 96,000 suicide attempts and around 1,850 people end their life (1). This means less than 0,5 % of people experiencing suicidal thoughts, ultimately end their life. Because of the enormous impact of suicide though, there is more attention and focus for suicide than for the more common suicidal behaviour.

Clinical differentiation of somatic disorders is common. For example the differentiation and classification of breast cancer (2), diabetes (3), dementia (4) etc. Differentiation and classification of disorders has resulted in improved diagnosis, more effective treatment and targeted counselling strategies. Suicidal behaviour is complex and multi-layered; it never occurs in isolation because there are always several factors at stake. Except for a distinction between suicidal behaviour with or without attempt or between acute and chronic suicidal behaviour, general guidelines, scientific research and general texts about suicidal behaviour do not differentiate suicidal behaviour, Still, it continues to be defined as a uniform concept (5-7).

When it comes to treatment or management of suicidal behaviour: risks assessment for suicide is extremely difficult. Even though some predictive, treatable factors are known, the main emphasis seems to be on treatment of underlying psychiatric illness and general safety planning rather than on the suicidal process that may lead to suicide. Suicidal behaviour occurs in a variety of psychiatric disorders (8), but only for borderline personality disorder and/or major depressive disorder suicidal behaviour is one of the possible symptoms required to meet the DSM-classification criteria. There is some knowledge and evidence of effective, specific forms of psychotherapy and biological treatments for suicidal behaviour (9). However, we observe a discrepancy between knowledge and the practical application of what we know. Theoretical results from neuro-imaging, research into genetic vulnerability for

suicide and psychiatric research into suicidal behaviour for example, are often difficult to apply into practice.

Mental health services have extensive knowledge and experience with suicidal behaviour and are almost automatically expected to manage people presenting with suicidal behaviour. The matter of professional responsibility and liability is extremely complex whether it is about collective responsibility, or individual responsibility of members of a mental health team or other caregivers. Responsibilities of professionals are partially determined by the way people with suicidal ideation present themselves to services. Taking into consideration that in The Netherlands, 60% or less of the people who end their life were not known to mental health services (10), we might wonder whether specialist services should be solely responsible for managing suicidal behaviour. Inpatient units can admit patients when a community team is unable to manage the risks, however admission is also an opportunity to shift the risks from the community to the inpatient unit. It is a misconception that an inpatient unit is better able to keep a patient safe, however the effectiveness of admission is not known. We do know though that admission is not a determining factor for the ultimate suicide risk and can even lead to iatrogenic damage both on the short and long term (11, 12). Management of suicidal behaviour by non-specialist services – who may not have the extensive knowledge and support system to fall back on- is not straightforward and this will raise further questions about issues around responsibility. The complex dynamics and the risks resulting from suicidal behaviour, may lead to formalized and restrictive, ‘defensive’ practice.
Theoretical typologies are useful in generating new hypotheses about suicide risk, treatment and prevention. Classical, contemporary and empirical typologies of suicide have been established (see for an overview (13). A well-known example of classical typology is Emile Durkheim’s model that distinguishes:

(1) egoistic;

(2) altruistic;

(3) anomic; and

(4) fatalistic suicide.

Durkheim compared suicide rates for various groups (e.g., Protestants and Catholics, soldiers and civilians) and put in place a theory of suicide deducted from the influence of social forces. He argued that suicide rates are a reflection of the degree to which individuals were integrated into and regulated by society (14). An example of a more contemporary typology of suicide is the psychodynamic conceptualization of suicide, based on 'cessation', defined as 'discontinuation of capacity for any further conscious experience' (15). Shneidman used the term 'psyde' to represent cessation and delineated four subtypes of suicidal individuals:

(1) psyde-seekers;

(2) psyde-initiators;

(3) psyde-ignorers; and

(4) psyde-darers.

Empirical studies on typologies of suicide (1, 16-21) were conducted when more comprehensive statistical methods became available. Risk factors for suicide, identified in epidemiological studies, served as (sets of) variables to quantify typologies. For example, Reynolds and Berman (1995) attempted to distract the major subtypes of suicide previously reported in the literature, and empirically reduce them to a useful number. They identified significant overlap between typologies proposed by earlier theorists, and simplified them into five distinct subgroups (16):

(1) depression/low self-esteem;

(2) escapist;

(3) aggression;

(4) confusion; and

(5) alienation.

The identification of typologies of suicide has been useful to formulate theories to explain suicide, such as the Cry of Pain (CoP) hypothesis (22), the interpersonal theory (IPT) (23), the Escape From Self model -which extends existing theories of escape and arrested flight

(24) - We need however to bear in mind that theoretic types of suicide do not clearly discriminate between completed suicide and non-fatal suicidal behaviours. A relatively new approach in this context is the Integrated Motivational-Volitional Model of Suicidal Behaviour (25) aiming at making a distinction between persons with suicidal thoughts and those who engage in suicidal acts. Even though a differentiation model of suicidal behaviour would be helpful to develop and investigate successful treatment strategies, no clear differentiation systems for 'suicidal behaviour' are available (13).

The common, unpredictable, unstructured, and risky presentation of suicidal behaviour in clinical practice and the lack of structure and differentiation of management and diagnosis of suicidal behaviour has been the inspiration and the foundation of the development of a model for clinical differentiation of suicidal behaviour: the (hypothetic) 4-type model of entrapment (H4ME). Its availability would enable clinicians to develop specific forms of management of suicidal behaviours and may enhance scientific research of suicidal behaviour at biological, psycho-therapeutic and social level (8 , 26-28, 29 , 30, 31). The H4ME model is purely based on clinical experience and assessments of a diverse range of suicidal presentations in mental health care practice. Hence, clinical practice is the starting point of the model's development.

Figure 1 about here

1 The context of development

The H4ME has been developed in response to the publication of the Dutch multidisciplinary guideline on the assessment and treatment of suicidal behaviour (32). The implementation of the guidelines by the Dutch mental health care system has been supported by the PITSTOP-study (33), a cluster randomized trial, examining the effect of an e-learning supported train-the-trainer model to train mental health care workers in applying guideline recommendations,

compared with ‘the usual’ implementation strategy. The PITSTOP-training was specifically developed for this study (34) and is based on an integrated model of stress-vulnerability (35) and entrapment (36) to explain the onset of suicidal behaviours (Figure 1), designed and introduced by the authors of the Dutch multidisciplinary guideline (32).

Figure 2 about here

During the PITSTOP-training, mental health care workers are trained to assess suicidal behaviours according to the Clinical Assessment of Suicidal Episodes (CASE)-method (37) (Figure 2), a 4-step interview for the assessment of suicidal behaviour. First, the current suicidal condition is examined to estimate the likelihood of completed suicide at the time of the interview. Second, stressful events contributing to the onset of the suicidal behaviour are examined. Third, vulnerability and protective factors for suicide are assessed, and fourth, the patient’s prospects of the future is addressed. The extent of entrapment, the feeling of being trapped and the cognition that escape is only achievable through death (36) is established by looking at the outcome of the first (current suicidal condition) and the last step (the patient’s view of the future) of the CASE-interview. For example, a patient who is an immediate risk of suicide and cannot see a future or an improvement of his situation, is more likely to feel ‘entrapped’ than a patient considering suicide because his wife is insisting on a divorce. On the basis of the CASE-interview outcome, an appropriate multidisciplinary treatment strategy is established. For instance by moderating the impact of stress factors, or by strengthening factors that protect the patient from getting entangled by the entrapment (Figure 3).

Figure 3 about here

The PITSTOP-training resulted in an increased adherence to the Dutch multidisciplinary guideline compared to usual implementation strategies (38, 39). The PITSTOP-training has become the ‘golden standard’ in the Netherlands when it comes to training mental health

care workers in suicidal behaviour assessment and prevention strategies. Over the years, more than 40.000 mental health care workers of all professional disciplines were trained by the PITSTOP-training. We found that mental health care professionals are becoming more familiar with the concept of 'entrapment' and more skilled in looking at -and discussing- the pathway to entrapment. These essential skills are learned with the PITSTOP training. Currently, estimating the level of entrapment is the key strategy for assessment of short and long term suicide risks in patients presenting to mental health services with suicidal behaviour.

2 The benefits of clinical differentiation of suicidal behaviours

We believe that theoretical and empirical typologies of suicide have limited use in clinical practice. First, sets of variables representing a suicide typology may result in an unreliable estimate of the acute suicide risk. Additionally, whether patient factors or social factors increase or moderate the suicide risk depends on the context of in which it occurs (40). For example, unemployment is a risk factor for a patient who recently lost his job, and is a vulnerability factor when long term unemployment has resulted in depression. When a patient lacks social skills to maintain himself in employment and is entitled to unemployment benefits, unemployment may be a protective factor. Secondly, clinicians are not primarily interested in future suicide risks, but mostly want to know how to act to prevent suicide when assessing the immediate suicide risk. This may explain why international guidelines (41-43) do not distinguish between types of suicidal behaviour.

We notice that a practical rather than a theoretical approach to management of the presenting behaviour, would be preferable for clinical practice. The presented H4ME model is a practical way to create order in the complexity of suicidal behaviour. It distinguishes between different presentations of suicidal behaviour and makes it easier for all stakeholders to assess this. The model supports clinicians to decide on the most appropriate, evidence based management of suicidal behaviour and allows a critical appraisal of roles and

responsibilities of all stakeholders involved (the community, specialist and non-specialist health services, neighborhoods, patients, relatives of the patient) in a practical and non-judgmental way. We assume that this will result in a change in dynamics, and allow for best practice solutions and more evidence-based treatment.

4 The hypothetic 4-type model of entrapment (h4ME)

The Dutch multidisciplinary guideline (32) distinguishes between chronic suicidal conditions and acute suicidal conditions (44). Van Luyn states that chronic suicidal behaviour can be part of a diagnostic feature of borderline personality disorder. Patient with a borderline personality disorder may become acutely suicidal in response to a life event or when suffering with a comorbid depression. An increased sense of helplessness and despair may (temporarily) increase the suicide risk. There is a difference in response of mental health care professionals to acute and chronic suicidal behaviour. Whilst a patient with chronic suicidal thoughts is expected to be able not to act on those thoughts, mental health care professionals are expected to protect the person if the suicidal intent suddenly becomes more acute and the risk of suicide increases. (45).

Van Luyn's view (2010) inspired us to differentiate 'the aetiology of entrapment'. Aetiology refers to the study of causation and onset of the condition. Looking at typologies as the starting point of the assessment of suicide risks and suicide prevention (13), we set out to develop a 4-type model (h4ME) of entrapment rather than a model based on different types of completed suicide. We believe it is possible to categorize any form of suicidal behaviour encountered in clinical practice into one of the four types, and think that the H4ME is generally applicable irrespective of specific patient features like age, gender, diagnostic category or any other subgroup-feature. However, we cannot rule out that some patient -or environmental- characteristics may be associated with one or more types of entrapment. Additionally, we can foresee that ' entrapment types' will need a more specific description or further differentiation. This is currently studied in a validation study (46) (see paragraph 6).

Screening of suicidal behaviour will be improved if instruments and procedures are based on a small number of subtypes, and typologies should be based on existing models of suicidal behaviours (13). The H4EM is based on the theory of entrapment, stating that the more the patient perceives 'entrapment', the higher the actual suicide risk (36). The model is further based on the assumption that suicide risks may vary between patients, and within patients over time (32).

First, we will describe the four types of entrapment of the H4ME and subsequently, we will present the SUICIDI-2 classification (Suicidal DIfferentation-version 2): a preliminary instrument by which entrapment can be classified in type I, II, III, IV. Table 1 displays vignettes of the four types.

The H4ME* distinguishes between four types of entrapment aetiology:

I Perceptual Disintegration (PD); entrapment originated from the context of disturbed perceptions and/or behaviours.

II Primary Depressive Cognition (PDC); entrapment in the context of (a) depressive cognition(s)

III Psychosocial Turmoil (PT), entrapment in the context of acute reactivity to a (deemed or actual) loss, offence, adversity or doom.

IV Emphasizing Emotional Pain (EEP) (inadequate communication); entrapment in the context of communicating intense suffering

*Substance abuse and/or somatic symptoms can be viewed as modifiers whose effect depends on the subtype of entrapment.

Figure 4 about here

A multi-dimensional approach, making use of theoretical aspects of different forms of psychopathology and different dimensions of personality deficiencies playing an important role in the different presentations of suicidal behaviour, was used for the theoretical

foundation of the model. The model includes two clinical subtypes recognizable in clinical practice which are derived from the theoretical model of 'affective dysregulation and perceptual disintegration' (47) and dimensions of the Cloninger model for temperament and character (48) with the 'personality deficiency dimensions' of temperament (harm-avoidance, novelty seeking, reward dependence and character) and character (self-directedness and cooperativeness).

Table 1 about here (vignettes)

5 SUICIDI-2; an instrument to classify entrapment

The SUICIDI-2 (SUicidalDIfferentation-version 2) was designed to assign the entrapment status to type I, II, III or IV. The SUICIDI-2 should be considered as a provisional description of the four types of entrapment. Over the last three years, the ongoing development of the H4ME model and the SUICIDI-2 was presented to psychiatrists, psychologists and nurses. The H4MEmodel and the SUICIDI-2 were presented in meetings in the context of suicide prevention in the Netherlands and abroad (46, 49 , 50-54). Those meetings provided feedback of attenders; feedback was processed and resulted in the adoption of new versions. The SUICIDI-2 (and earlier versions) was repeatedly tested to examine its usability, it was discussed and adjusted after thorough discussion among suicide prevention experts during the last three years. The model was well received by colleagues and turned out to be suitable in clinical practice. It supports a clearer distinction between different fenotypes of suicidal behaviours and promotes a more tailored management and treatment strategy. The model has been used as a basis to develop a treatment algorithm for suicidal patients to investigate suicidal behaviour, as part of the Dutch National Suicide Prevention Policy, (55)

Table 2 about here

6 Validation strategy of the H4ME

Future research into the model may demonstrate that the model is not just applicable in practice but carries scientific validation and evidence. The hypothetical H4ME model has not been validated yet and as such may not cover the whole spectrum of suicidal behaviour. Proposed subtypes may overlap or need further differentiation. It is not known yet, whether the SUICIDI-2 will capture the complete range of behaviour as encountered within mental health services and may need adjustment. This is why we have initiated the VAMOS-G study the VAlidatie-Model-Suicidaal-Gedrag (validation model suicidal behaviour) (7). Aims of the study are:

1. determining whether the preliminary clinical model H4ME (54) accurately describes the complete spectrum of suicidal behaviour as encountered in specialist mental health services;
2. checking whether the SUICIDI-2 allows classification of the 4 types as described in H4ME;
3. investigating whether (and how) the SUICIDI-2 needs to be adjusted in order to classify suicidal behaviour in four or more types, or if there is overlap.

Further research may answer the questions we raised and may result in an improvement of the model.

7 Discussion

Suicide risks vary in severity, which determines the urgency with which it needs to be managed. Suicide risk varies between the different types of entrapment and within the groups of identified patients. Progress varies, the etiology may be different and risks may recur. The model is not a statistical model and one type of suicidal behaviour does not necessarily exclude the other. Management of suicidal behaviour often depends on management of underlying issues, be it psychological, psychiatric, social or physical. Guidelines advise on treatment of comorbid or underlying mental illness, and include psychological treatment and support, not just for personality disorders, but also in case of

inadequate coping skills. Examples are dialectical behaviour therapy (DBT) mentalization based psychotherapy (MBT), and transference focused psychotherapy (TFP) which are all effective for suicidal behaviour in borderline personality disorder, achieving a reduction in suicidal behaviour (56) Mindfulness based cognitive therapy (MBCT) has been shown by several studies to be effective (27) although -looking at the model- we do not know for which kind of suicidal behaviour this would work best.

Table 3 describes -per type- features, diagnosis, (pharmacological) treatment policy, and follow-up risk assessment; recommendations are based on empirical evidence and best practice.

Table 3 about here

Another, promising way to manage suicidal behaviour, focusing on the suicidal process is CAMS (26, 28). This method zooms in on the motivational drivers forming the basis of suicidal behaviour. The above named treatments and management of suicidal behaviour might work best for the entrapment category of 'depressive cognition' but also for 'Emphasizing Emotional Pain (inadequate communication and coping) and more research is needed to find out if differentiation may improve the indication for specific psycho-therapeutic treatment.

There is convincing evidence that cognitive behaviour therapy is effective for treatment of suicidal behaviour (57). However, does this entail that it is equally effective for all types of suicidal behaviour (31)? We are unable to elaborate on all and every form of psychotherapeutic treatment option that is available, and need to be very careful about suggesting any, but we do know that the differentiation model may be helpful in allocating specific forms of treatment to specific forms of suicidal behaviour.

There is insufficient evidence for the effectiveness of antidepressants, antipsychotics, mood stabilisers, anxiolytics or ECT for isolated suicidal behaviour (29, 58). Only for clozapine and lithium there is evidence of a relation between reduction in suicidal behaviour and

psychotropic medication, however the type of suicidal behaviour for which it might be effective has not been specified (9, 59). Perhaps work best for perceptual desintegration. Hypnotics help to improve sleep for all groups, especially for the ‘psycho-social entrapment ‘group. But there is no strong evidence it will help with the reduction of suicidal behaviour when there are serious sleep problems and ruminations.

ECT is more effective in reducing suicidal behaviour than in reducing other symptoms associated with depression however there is still no convincing evidence that it lifts suicidal behaviour completely. Perhaps clearer boundaries between groups and improved subtyping of suicidal behaviour may generate research into evidence that it may help for the ‘perceptual disintegration-type’. Treatment with ketamine may play a role in treatment of treatment resistant depression (60) and may especially be effective for the ‘primary depressive cognition’ type.

As mentioned before, the H4ME model may also shed a light on responsibilities. Defensive practice and risk-aversion may lead to attempts to shift responsibilities to other services, for example from the community mental health service to the acute admission ward. This will lead to the emphasis being put on the responsibility of services and not on the best treatment for the patient. The model may help to allocate the appropriate form of care to a specific group and may prevent iatrogenic damage. Admissions for patients with personality disorders or people from the ‘emphasizing emotional pain ‘group may be counterproductive (12). Ideally, for patients from the “psycho-social turmoil” group, admissions are kept brief. Long admissions may lead to alienation of a patients’ support network, paradoxically worsen the symptoms or increase the stigma.

Research of the effect of admission on suicide either in a locked or open ward, does not show convincing effect on reduction or prevention of suicide. The question remains: had a better differentiation of suicidal behaviour been available, would the outcome have changed?

Conclusion

We are convinced suicidal behaviour needs to be viewed as a heterogenous concept, and that we need to differentiate between various forms of suicidal behaviour. Differentiation will promote introduction of alternative and innovative ways to manage suicidal behaviour and professional responsibilities. It will allow research into biological, social and psychological factors contributing to suicidal behaviour being lifted to a higher level. We understand there is still a long way to go and this is a first attempt to introduce this kind of entrapment typologies. The development of the H4ME model is a venture into unknown territory and rather than taking the usual route of applying theoretical knowledge into practice, we took the reverse route by developing a theoretical model based on practical experience.

Development of the model involved a paradigm shift, a change in conceptual thinking about suicide, and the realization that suicidal behaviour is heterogenous and multi-factorial rather than an uniform concept.

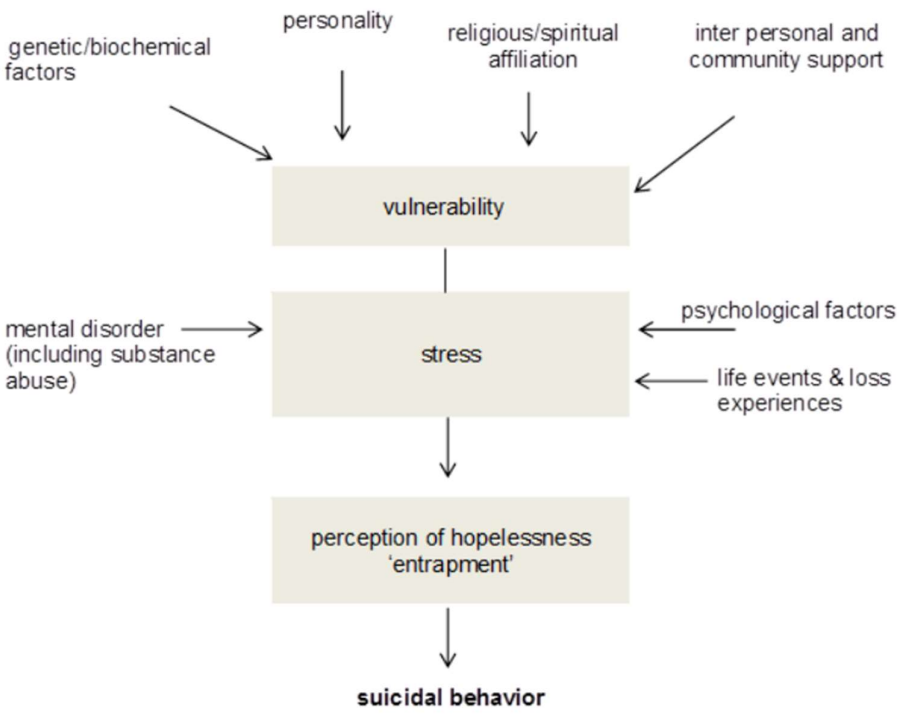

FIGURE 1

Integrated model of stress vulnerability (35) and entrapment (36) of suicidal behaviour

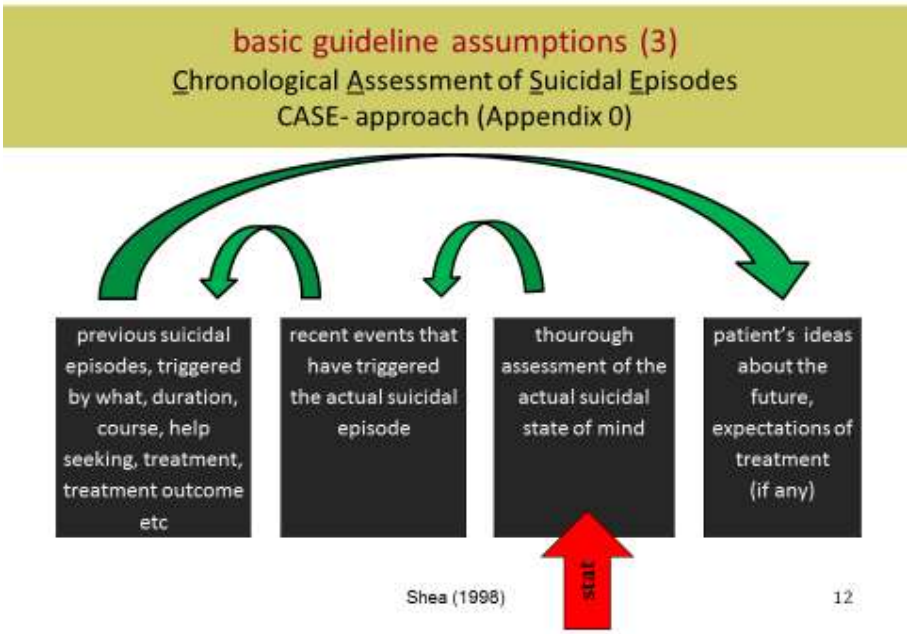

Figure 2

CASE interview (37)

Subject	observing / questioning	Increasingrisk	Decreasing risk/protective	
1 CURRENT SUICIDALITY	Acuteness of suicide risk	• strong wish to end life • little control over own actions • pressure to execute suicide plans • peceived burden to others • dichotomous thinking • severe perceived sense of suffering • tunnel vision • acces to means	• low intention to die	E N T R A P M E N T
2 RECENT STRESSORS	illness/poor health impact of life-changing events	• psychiatric symptoms; • substance abuse • somatic illness • loss • psycho social stressors • humiliation	• connectedness with others • positive therapeutic relationship with mental health professional • parenthood • involvement with religious organization	
3 PROTECTIVE FACTORS	personality characteristics history of suicidal behaviour extent of social support; minimum needs for fulfillment have been met	• impulsivity • lack of problem-solving skills • history of suicidal ideation • history of suicide attempts • family history of suicidal behaviour		

		• reduced sense of meaning	
4 FUTURE PLANNING	Can see improvements and change for the better	• strong wish to end life • lack of control over behaviour • pressure to execute suicide plans • burden to others • dichotomous thinking • experience of severe suffering • tunnel vision • access to means	• expectation that things will change or improve positively

Figure 3: Theoretical aspects of the CASE for the assessment of suicidal behaviour

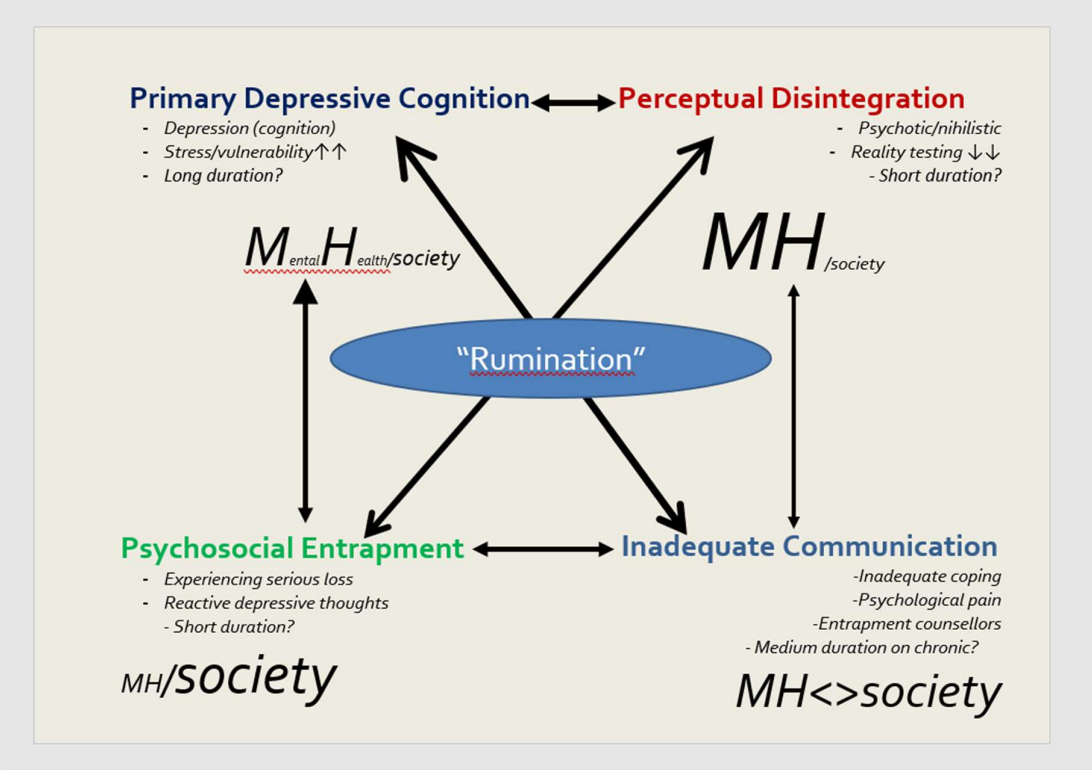

Figure 4. The four subtypes of suicidal behaviour and theoretical aspects

Table 1 Vignettes of entrapment typology

Vignet 1

This case is about a 31 year old woman, developing suicidal thoughts two weeks after delivering her first child, believing her stepfather fathered the child, and not the biological father of the child. There is a history of sexual abuse as a young girl, with stepfather as the perpetrator. Patient believes her child will return to the 'immaculate universe', which is -according to patient- a timeless entity without inequality. Patient has a history of previous psychotic episodes and two serious suicide attempts and except for a partner who is a lorry driver, there is little support and/or network at home.

Vignet 2

This case is about a 24 year old student who is convinced suicide is the only way out in a situation perceived as unbearable and unlikely to improve. He was recently diagnosed with bipolar affective disorder (BPAD) when he presented with a depressive episode and the suicidal ideation gradually got worse. The patient experiences severe side effects of psychotropic medication and worries about 'ending up' like his father, who was also diagnosed with BPAD. Patient sees himself as a failure and cannot foresee himself living his life as a 'psychiatric case'. Several members of his family tried to kill themselves when depressed and patient is vulnerable to adopt a similar behaviour pattern. Protective factors are fellow students, housemates and his younger sister who is still living with their parents. Considers himself to be a burden to others and finds it difficult to contain his impulse to hang himself.

Vignet 3

This case is about a 47 year old man who became suicidal after his wife ended the marriage and kicked him out when she caught him watching child porn on his computer. His wife reported him to the police and informed the board of the school where he worked as vice-headmaster. Patient ran off with his car and was reported missing for several hours. He was picked up by the rail-track the same evening, waiting in his car for the freight-train. He was desperate, thinking he could not continue living out of shame and feared he was going to lose contact with his wife, children, family including in-laws, work and church, just about everything that made his life worth living. Even though his son assured him

he would continue supporting his father, patient did not want to face anyone. Patient is convinced he is better of dead and deserves God's punishment for his behaviour.

Vignet 4

This case is about a 56 year old, divorced woman who attempted to take her life by taking 20 tablets of Oxazepam 10 mg and a bottle of wine. Patient warned her daughter after the overdose, who then found her. Reason for the overdose was a comment from her daughter that she thought it was better for patient not to see her grandchildren and patient felt rejected. Half a year ago patient had a CVA; ever since she suffers with a right-sided paralysis and is wheelchair-bound. She is known with alcohol-dependency, chronic suicidal behaviour and has a history of suicide attempts. Patient tried to kill herself after her other daughter died (1996), her partner (2011) and when her grandchild was diagnosed with neuroblastoma (2014). Patient is angry she did not manage to kill herself and is resentful towards her daughter because she called 999. For her, life is not worth living with physical disabilities and not being able to see her grandchildren.

Table 2:

The SUICIDI-2 classification of entrapment types

type	explanation	description
I	Perceptual Disintegration (PD)	0= not applicable 1= the suicidal behaviour is associated with disturbed perception caused by perceptual disintegration and/or behaviour, but may also be explained by (an) other cause(s)* 2=the suicidal behaviour is mostly explained by disturbed perception caused byperceptual disintegration and/or behaviour* *probability of psychosis may be explained by a number of contributing factor. For example: a patient developed psychosis with suicidal thoughts while going through bereavement. In this case, psychosis is the cause; a (2) must be scored. This will also be the case when psychosis is triggered by substance use.
II	Primary Depressive Cognition (PDC)	0= not applicable

		1 = the suicidal behaviour is associated with depressive, negative thoughts or is related to dreariness, perceived sense of failure or imperfection. 2 = the suicidal behaviour is associated with depressive, negative thoughts or is related to feelings of depression, failure or imperfection. There is no psychotic symptomatology. The condition does not suddenly occur as a consequence of a negative event.
III	Psychosocial Turmoil (PT)	0= not applicable 1= the suicidal behaviour is a reaction to an unexpected event accompanied by a loss. However, the onset of the suicidal behaviour may also be explained by (an) other cause(s). 2 = the suicidal behaviour is mostly explained by a real or imaginary experience of loss, adversity or doom. Depressive symptoms may be present, but last for less than two weeks. Negative cognitions are present, but they do not stem from psychosis. The suicidal behaviour is not initiated and used as a tool to convince others to help or change the situation
IV	Emphasizing Emotional Pain (EEP) (inadequate communication)	0= not applicable

		1 = the suicidal behaviour is a way to express how suffering has increased the burden and/or the behaviour is initiated to convince others to make changes to the situation The clinician has the impression that the patient does not have communicative skills to express their distress Still, the clinician cannot fully assess whether the suicidal ideation is genuine. 2= the suicidal behaviour is clearly used as a way to bring about change, however for others to initiate the change. Depressive or psychotic symptoms are absent.

Table 3:

Subtypes of suicidal behaviour and possible relations and hypothetical policy

	Perceptual Disintegration	**Primary Depressive Cognition**	**Psychosocial turmoil**	**Emphasizing emotional pain**
Severity of the suicide risk	++++	++	+++	+
Duration	Days/weeks	Weeks/months	Days	Day's/hours; often exacerbation of chronic suicidal behaviour
Expected course	-Reduction after treatment of psychosis	-Reduction after biological and/or psychological treatment	-Reduction when tunnel-vision decreases - Reduces when peak of mourning has passed	-Non-specific reduction within hours/days or when behaviour has been exposed or when underlying problems have come to the surface. -Risk of acute shift to chronic risk and shift to another type

Recurrence	-New psychotic episode -Triggering of trauma	-Recurrent affective disorder	-Recurrent episode of psychosocial stress or continuation of severe stress -received 'narcissistic' affront	-Interpersonal stress and perceived powerlessness -Lack of external recognition of underlying suffering.
Reassessment of suicide risk	-Several times a day -Continuous during treatment -After recovery -With the recurrence of a new episode -as precaution during trauma therapy	-Several times a day -Regularly during treatment -After recovery -New episode, when the mood deteriorates	- Several times a day - Ranging from a few times a day to zero. - in the aftermath of an acute suicidal episode - During a new episode of severe psychosocial stress and/or new setback	-After the suicidal episode -When continued or renewed lack of recognition of underlying suffering -During interpersonal stress and perceived powerlessness

Pharmacotherapy	-antipsychotics (clozapine) and/or mood stabilizer (lithium) - possibly additional benzodiazepines in the event of major anxiety.	-Antidepressant and / or mood stabilizer - Restrained use of benzodiazepines when increased risk of impulsivity -Short-term benzodiazepines for sleep deprivation	-Restrained use of medication - Possibly symptom relief for sleep deprivation and/or great anxiety	Hold back medication when possible (changes in or addition to) pharmacological treatment
Actions during crisis	- Admission (if needed) -Intensive home treatment if risk is acceptable	Emergency care, - Intensive home treatment	Short admission	(F)ACT, crisis plan

Follow-up	-Outpatient treatment of psychotic symptoms, -Trauma treatment	Outpatient treatment of depressive symptoms with CBT, CAMS etc..	-General practitioner	-(F)ACT, - Additionally DGT or CAMS or collaborative care, etc. -Vigilant for change of symptoms
Responsibility patient	- Increasing when disintegration reduces	- Increasing when depressive symptoms reduce	-Increasing when 'tunnel vision' fades	-holding back of taking over control -offer maximum support -recognize emotional suffering

References

1. Ten Have M, De Graaf R, Van Dorsselaer S, Verdurmen J, Van 't Land H, Vollebergh W. Suïcidaliteit in de algemene bevolking. Resultaten van de Netherlands Mental Health Survey and Incidence Study (NEMESIS) Suicidality in the general population. Results of the Netherlands Mental Health Survey and Incidence Study (NEMESIS). Utrecht; 2006.
2. Sotiriou C, Neo S, McShane L, Korn E, Long P, Jazaeri A, et al. Breast cancer classification and prognosis based on gene expression profiles from a population-based study. Proceedings of the National Academic of Sciences of the United States of America. 2003;100(18):10393-8.
3. American Diabetes Association. Diagnosis and classification of diabetes mellitus. . Diabetes Care. 2005;28:37-42.
4. Joosten-Weyn Banningh L, Vernooij-Dassen M, Rikkert MO, Teunisse J-P. Mild cognitive impairment: coping with an uncertain label. International Journal of Geriatric Psychiatry. 2008;23(2):148-54.
5. Bernanke J, Galfalvy H, Mortali M, Hoffman L, Moutier C, Nemeroff C, et al. Suicidal ideation and behavior in institutions of higher learning: A latent class analysis. Jornal of Psychiatry Research. 2017;9(95):253-9.
6. Colpe LJ, Pringle BA. Data for building a national suicide prevention strategy: what we have and what we need. American journal of preventive medicine. 2014;47(3 Suppl 2):S130-6.
7. De Winter R, Hazewinkel M, Meyer C, van den Bos A, Enterman J, Heidstra A, et al. Protocol voor de VAMOS-G studie. Garmerwolde; 2020.
8. Baldessarini R, Tondo L. Suicidal Risks in 12 DSM-5 Psychiatric Disorders. . Journal of Affective Disorders. 2020;15(271):66-73.
9. Zalsman G, Hawton K, Wasserman D, Van Heeringen K, Arensman E, Sarchiapone M, et al. Suicide prevention strategies revisited: 10-year systematic review. Lancet Psychiatry. 2016;3(7):646-59.
10. Huisman A. Learning from suicides. Towards an improved supervision procedure of suicides in mental health care in the Netherlands. Amsterdam: Vrije Universiteit; 2010.
11. De Winter R, Hazewinkel M, van de Sande R, de Beurs D, de Groot M. Outreach Psychiatric Emergency Service. Characteristics of Patients With Suicidal Behavior and Subsequent Policy. Crisis. 2020;41(5):375-382. doi: 10.1027/0227-5910/a000651.. 2020.
12. Huber C, Schneeberger A, Kowalinski E, Fröhlich D, Von Felten S, Walter M, et al. Suicide risk and absconding in psychiatric hospitals with and without open door policies: a 15- year, observational study. Lancet Psychiatry. 2016;3 (9):842-9.
13. Martin J, LaCroix J, Novak L, Ghahramanlou-Holloway M. Typologies of Suicide: A Critical Literature Review. Archives of Suicide Research. 2019;24(2):1-30.
14. Durkheim E. Suicide : a study in sociology. New York: Free Press; 1951.
15. Shneidman E. Orientations toward death. A vital aspect of the study of lives. International Journal of Psychiatry. 1966;2(2):167-200.
16. Reynolds F, Berman A. An empirical typology of suicide. . Archives of Suicide Research. 1995;1(2):97-109. .

17. Chen EYH, Chan WSC, Chan SSM, Liu KY, Chan CLW, Wong PWC, et al. A cluster analysis of the circumstances of death in suicides in Hong Kong. Suicide and Life-Threatening Behavior,. 2007;37(5):576-84.
18. O'Connor RC, Sheehy NP, O'Connor DB. The classification of completed suicide into subtypes. . Journal of Mental Health. 1999;8(6):629-37.
19. Wold CI. Sub-groupings of suicidal people. Omega - Journal of Death and Dying,. 1971;2(1):19-29.
20. Logan J, Hall J, Karch D. Suicide categories by patterns of known risk factors. Archives of General Psychiatry,. 2011;68(9):935-41.
21. Sinyor M, Schaffer A, Streiner D. Characterizing suicide in Toronto: An observational study and cluster analysis. . The Canadian Journal of Psychiatry, . 2014;59(1):26-33.
22. Williams J. The Cry of Pain. London: Penguin; 2001.
23. Joiner T. Why people die by suicide. Cambridge, Massachusetts, London: Harvard University Press; 2005.
24. Baumeister RF. Suicide as escape from self. Psychological Review. 1990;99(1):90-113.
25. O'Connor R. Towards an integrated motivational-vlitional model of suicidal behaviour. In: O'Connor R, Platt J, Gordon J, editors. International Handbook of Suicide Prevention Research, Policy and Practice. Chichester: John Wiley & Sons; 2011.
26. Andreasson K. Suicide prevention and borderline personality disorder-The DiaS trial. Copenhagen: PhD Thesis University of Copenhagen; 2016.
27. Barnhofer T, Crane C, Brennan K, Duggan D, Crane R, Eames C, et al. Mindfulness-based cognitive therapy (MBCT) reduces the association between depressive symptoms and suicidal cognitions in patients with a history of suicidal depression. . J Consult Clin Psychol 2015;83(6):1013-20.
28. Jobes D, Linehan M. Managing Suicidal Risk. A Collaborative Approach. . Second Edition ed. New York: Guilford Press 2016.
29. Jobes D, Chalker S. One Size Does Not Fit All: A Comprehensive Clinical Approach to Reducing Suicidal Ideation, Attempts, and Deaths. Int J Environ Res Public Health. 2019;Sep 26;16(19):3606.
30. Mann J, Currier D. Medication in Suicide Prevention Insights from Neurobiology of Suicidal Behavior In: Dwivedi Y, editor. The Neurobiological Basis of Suicide. Boca Raton (FL): CRC Press/Taylor&Francis 2012.
31. Mewton L, Andrews G. Cognitive behavioral therapy for suicidal behaviors: improving patient outcomes. . Psychol Res BehavManag 2016;9(1):21-9.
32. Van Hemert A, Kerkhof A, de Keijser J, Verwey B, van Boven C, Hummelen J, et al. Multidisciplinaire richtlijn voor diagnostiek en behandeling van suïcidaal gedrag. Utrecht: De Tijdstroom; 2012 2012.
33. De Beurs D. Improving care for suicidal patients by implementing guideline recommendations. On the effects of an e-learning supported train-the-trainer program and the assessment of suicide ideation. . Amsterdam: Vrije Universiteit; 2015.

34. De Groot M, De Beurs DP, De Keijser J, Kerkhof AJFM. An e-learning supported train the-trainer program to implement a suicide practice guideline. Rationale, content and dissemination in Dutch mental health care. Internet Interventions. 2015;2(3):223.
35. Goldney D. Suicide Prevention: a practical approach. Oxford: Oxford University Press; 2008 2008.
36. Williams J, Barnhofer T, Duggan D. Psychology and suicidal behavior: elaborating the entrapment model. In: Hawton K, editor. Prevention and treatment of suicidal behavior From science to practice. Oxford: Oxford University Press; 2005.
37. Shea S. Psychiatric Interviewing, the art of understanding. Philadelphia: Saunders Company; 1998.
38. De Beurs D, De Groot M, De Keijser J, Mokkenstorm J, Van Duijn E, De Winter R, et al. The effect of an e-learning supported Train-the-Trainer programme om implementation of suicide guidelines in mental health care. Journal of Affective Disorder. 2015;175C:446-53.
39. De Beurs D, De Groot M, De Keijser J, Van Duijn E, De Winter R, Kerkhof A. Evaluation of benefit to patients of training mental health professionals in suicide guidelines: cluster randomised trial. . British Journal of Psychiatry. 2016;208(5):477-83.
40. Neeleman J. The social and epidemiological context of suicidal behaviour. Groningen: Rijksuniversiteit; 1997.
41. National institute for health and care excellence. Suicide prevention Quality standard. Manchester/London: NICE; 2019.
42. New Zealand Guideline Group. The assessment and management of people at risk of suicide. Wellington: NZGG/Ministry of Health; 2012.
43. American Psychiatrist Association. Practice guideline for the assessment and treatment of patients with suicidal behaviors [published correction in Am J Psychiatry. 2004 Apr;161(4):776]. . Am J Psychiatry. 2003;160(11 Suppl):1-60.
44. Van Luyn B, Kaasenbrood A. Suïcidaliteit in de acute en sociale psychiatrie. In: Kerkhof A, Van Luyn B, editors. Suïcidepreventie in de praktijk. Houten: Boh Stafleu Van Loghum; 2010. p. 217-34.
45. Van Luyn B. Behandeling van suïcidaliteit bij persoonlijkheidsstoonissen. In: Kerkhof A, Van Luyn B, editors. Suïcidepreventie in de praktijk. Houten: Boh Stafleu Van Loghum; 2010. p. 187-98.
46. de Groot M, De Winter R. Beoordeling van het suïciderisico. Houten: Ing. Alex Langhout; 2020.
47. De Winter R. Towards an improvement of thedifferentiation of depressive disorders. A multidimensional approach. . Leiden Leiden University Medical Center (LUMC); 2009.
48. Zaninotto L, Solmi M, Toffanin T, Veronese N, Cloninger C, Correll C. A meta-analysis of temperament and character dimensions in patients with mood disorders: Comparison to healthy controls and unaffected siblings. Journal of Affective Disordorders 2016;194(2):84-97.
49. De Winter R, van den Bos A. Differentiatie van suïcidaal gedrag. Voorjaarscongres Nederlandse Vereniging Voor Psychiatrie (NVVP); 2018 April 13; Maastricht2018.
50. De Winter R, de Groot M. Differentiation of suicidal behaviour, a practical clinical approach. European Symposium on Suicide and Suicidal behaviour 17 (ESSSB17); September, 5 2018.; Gent, 2018.

51. De Winter R, Meyer C, van den Bos A, Kool N, de Groot, M. Differentiation of Suicidal Behaviour, a practical clinical approach. In: (IASP) IAfSP, editor.; September 17-21, 2019; Londonderry 2019.
52. De Groot M, De Winter R. Beoordeling van het suïcide risico. In: Van Heeringen K, Portzky G, De Beurs D, Kerkhof A, editors. Handboek Suïcidaal Gedrag. Amsterdam: De Tijdstoom/Boom; 2019. p. 285-304.
53. De Winter R. Differentiatie van suïcidaal gedrag. Digitaal Voorjaarscongres Nederlandse Vereniging voor Psychiatrie (NVVP); June, 17; Maastricht2020.
54. De Groot M, De Winter R. De beoordeling van het suïciderisico. In: Van Heeringen K, Portzky G, De Beurs D, Kerkhof A, editors. Handboek suïcidaal gedrag. Amsterdam: De Tijdstroom; 2019.
55. 113 Zelfmoordpreventie. Suïcidepreventietoolkit Amsterdam2020. Available from: https://web.alii.care/protocols/3171?client=113.
56. Calati R, Courtet P, Lopez-Castroman J. Refining Suicide Prevention: a Narrative Review on Advances in Psychotherapeutic Tools. . J Curr Psychiatry Rep 2018;20(2):14.
57. Brown GK, Ten Have T, Henriques GR, Xie SX, Hollander JE, Beck AT. Cognitive Therapy for the prevention of suicide attempts. A randomised controlled trial. Journal of the American Medical Association. 2005;294(5):563-70.
58. Mann J, Currier D. Medication in Suicide Prevention Insights fromNeurobiology of Suicidal Behaviour. In: Dwivedi Y, editor. The Neurobiological Basis of Suicide. BocaRaton (FL): CRC Press/Taylor & Francis; 2012.
59. Tondo L, Baldessarini R. Antisuicidal Effects in Mood Disorders: Are They Unique to Lithium? Pharmacopsychiatry. 2018;5(15):177-88.
60. Dadiomov D, Lee K. The effects of ketamine on suicidality across various formulations and study settings Mental Health Clinician. 2019;9(1):48-60.