

# Understanding the complex of suicide: a stratification suicide risk protocol proposal

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## Introduction

- Suicide is a critical public health problem, being a leading cause of injury and death at a worldwide level, with approximately one million people who die by suicide per year and an estimate of around one suicide death occurring every 40 seconds (1). Suicide is ranked as the 2<sup>th</sup> leading cause of death among people aged 10 to 34 and the tenth among all age groups (1). Notably, suicidal behaviour has been implicated as a co-morbidity of several neuropsychiatric disorders, being considered one of the leading causes of preventable death amongst people affected with mental conditions (2).

## Objective(s)

- The present working group study aimed at systematically evaluating the main research studies in the field of suicide risk in psychiatric samples, by proposing a stratification suicide risk stratification model and a useful flow-chart for planning suicide preventive and therapeutic interventions for clinicians working within psychiatric settings, in a multidisciplinary and personalized approach to the patient.

## Method(s)

- A broad and comprehensive overview has been here conducted by using PubMed/Medline, combining the search strategy of free text terms and exploded MESH headings for the topics of 'Psychiatric Disorders' and 'Suicide'.

## Results

- Despite possible pathophysiological factors which may explain the complexity of suicide, the uniqueness of each patient determines the variability of the threshold for sustaining mental pain, a condition dependent on personal experiences, emotional states and intimate situation experienced from childhood. Key suicide risk factors have been clearly recognized and analyzed, by allowing a tentative proposal of a stratification suicide risk model to be applied in psychiatric settings.



RISK FACTORS		PROTECTIVE FACTORS	
<b>Factors affecting threshold for suicidal behaviour</b> <b>Demographic and individual risk factors</b> <ul style="list-style-type: none"> <li>• Male gender</li> <li>• Younger and/or older age</li> <li>• Personal history of attempted suicide</li> <li>• Positive family history of suicide</li> <li>• Marital isolation</li> <li>• Chronic physical illness</li> <li>• Parental loss through death before age 11</li> <li>• Child history of physical or sexual abuse</li> <li>• Corporal punishment in adolescence</li> </ul>		Demographic and individual risk factors <ul style="list-style-type: none"> <li>• No personal history of attempted suicide</li> <li>• No family history of suicide and/or attempted suicide</li> <li>• No personal and/or family history for psychotic symptoms and/or disorders</li> <li>• No personal and/or family history for SUD and/or AUD</li> <li>• Religious or moral constraints</li> <li>• Concern about social disapproval</li> <li>• Better coping skills</li> <li>• Feelings of responsibility towards family</li> <li>• Living with children under age 18</li> <li>• Supportive relationships</li> <li>• Positive and valid therapeutic alliance</li> <li>• Better impulsivity control</li> <li>• Better emotional regulation</li> </ul>	
<b>Symptom risk profile risks</b> <ul style="list-style-type: none"> <li>• Presence of hopelessness</li> <li>• Presence of low self-esteem</li> <li>• Feelings of worthlessness</li> <li>• Feelings of helplessness</li> <li>• Feelings of entrapment</li> <li>• Anhedonia</li> <li>• Cognitive rigidity</li> <li>• Impaired problem solving and/or decision making</li> <li>• Impulsive aggressive personality trait</li> <li>• Early onset of MDD</li> <li>• First episode of MDD</li> <li>• Comorbid SUD and/or AUD</li> <li>• Comorbid BPD</li> </ul>			
<b>Suicide Risk factors as triggers</b> <b>Demographic and individual risk factors</b> <ul style="list-style-type: none"> <li>• Social, financial or family crisis or loss</li> <li>• Contagion or recent exposure to suicide</li> <li>• Social support lacking</li> </ul>		Symptom protective risks <ul style="list-style-type: none"> <li>• Good self-esteem</li> <li>• Self-efficacy</li> <li>• Good problem-solving skills</li> <li>• Willingness to seek help</li> <li>• Positive coping skills</li> <li>• Emotional stability</li> <li>• Responsibility to family</li> <li>• Developed self-identity</li> <li>• Healthy lifestyle choices</li> </ul>	
<b>Symptom risk profile risks</b> <ul style="list-style-type: none"> <li>• Comorbid anxiety symptoms</li> <li>• Comorbid panic disorder</li> <li>• Acute alcohol and/or substance intoxication</li> <li>• Presence of psychotic symptoms</li> <li>• Severity of depressive episode of MDD</li> <li>• Post-partum</li> </ul>			
<b>Circumstantial risk profile risks*</b> <ul style="list-style-type: none"> <li>• Reduced or absent desire to live</li> <li>• Active SI</li> <li>• Presence of a SP</li> <li>• Presence of SB or SHB</li> <li>• Acute alcohol and/or substance intoxication</li> <li>• Unresolvable problems</li> <li>• Presence of auditory imperative hallucinations (order to suicide oneself)</li> </ul>		Circumstantial risk profile risks* <ul style="list-style-type: none"> <li>• Absence of SI, SP, SB or SHB</li> <li>• No feelings of hopelessness, desire to die</li> <li>• Good connectedness</li> <li>• Good therapeutic adherence</li> <li>• Positive therapeutic relationship and alliance</li> <li>• Good future planning</li> <li>• Solving of previous critical problems</li> <li>• Positive social support</li> <li>• Moral objections towards SB</li> <li>• Fear of social disapproval towards SB</li> </ul>	

<b>'White code' – No suicide risk</b>	<ul style="list-style-type: none"> <li>• Absence of SI</li> <li>• Negative personal and/or family history of suicide, previous SA</li> <li>• Symptomatological stability</li> <li>• Absence of specific suicide risk (see Table 1)</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical observation</li> <li>• Periodic suicide risk evaluation (including the occurrence of new situations, e.g., the presence of suicide risks before not present)</li> </ul>
<b>'Green code' – Low suicide risk</b>	<ul style="list-style-type: none"> <li>• Presence of SI (occasional, inconstant, fleeting, reported to clinician with scarce credence/conviction (e.g., present but criticized by the patient in a credible manner)</li> <li>• Acute depressive episode in MDD, mild severity (not stable, not remitted, without comorbid anxiety and/or mixed symptoms)</li> <li>• Positive family history of suicide and/or SA in MDD</li> <li>• Positive personal history of SHB and/or ST (single and/or recurrent, with low lethality)</li> <li>• Negative personal history for SA</li> </ul>	<ul style="list-style-type: none"> <li>• Careful and periodic clinical observation by clinicians and all components of the multi-disciplinary team (i.e., physicians, nurses, psychiatric rehabilitators, auxiliary staff, psychologists, etc.) of the patient, especially if he/she is almost silent (and/or he/she does not ask for help/support)</li> <li>• Actively listen to or support even only with our presence, by ensuring a peaceful atmosphere and inviting the patient to call and ask for help in the case he/she may experience negative thoughts</li> <li>• Developing a good therapeutic alliance and relationship</li> <li>• Encouraging the expression of thoughts and/or feelings (also negative)</li> <li>• Providing information and support to patient and his/her family members regarding the management of a potential emotional crisis and/or instability and about the alternative coping strategies useful for managing and solving critical problem(s)</li> <li>• Carefully observing family, personal and group dynamics and identifying specific potential trigger factors</li> <li>• Monitoring and alerting about the occurrence of potential symptoms and/or behaviours at risk (e.g., anxiety, agitation, irritability, hypervigilance and/or mood instability)</li> <li>• If possible, do not leave the patient alone (e.g., choose a room with a mate)</li> <li>• Carefully evaluating the correct intake of medications (do not leave the medications to patient without checking its assumption)</li> <li>• Carefully monitoring about personal potentially risky duties</li> </ul>
<b>'Yellow code' – Moderate suicide risk</b>	<ul style="list-style-type: none"> <li>• Presence of SI (constant, with low intensity)</li> <li>• Presence of SI (partially criticized by the patient in a credible manner)</li> <li>• Positive and recent personal history of SA without current SI</li> <li>• Acute depressive episode in MDD, moderate severity (not stable, not remitted, with comorbid anxiety and/or mixed symptoms, without psychotic symptomatology)</li> </ul>	<ul style="list-style-type: none"> <li>• As for 'green code' plus</li> <li>• Informing and involving family members</li> <li>• Providing a personalized supervision and vigilance</li> <li>• Evaluating the safety of personal duties (assisting the patient during the use of potential risky objects)</li> <li>• Eventually, if any, evaluating if changing the room, the position of the bed, in order to increase the visibility for clinical observation</li> <li>• Encouraging the patient to objectively evaluate the positive aspects of the current situation, by analyzing the success experiences (self-motivating statement)</li> <li>• Correcting his/her sensorial and/or situation/circumstantial wrong perceptions, without belittle his/her fears and without showing disapproval of his/her convictions</li> <li>• Limiting frustrating situations if patient is not currently able to express the anger feeling in a constructed and balanced manner</li> <li>• Facilitating the expression of anger feelings in a more functional manner (e.g., sports)</li> <li>• Stimulating the patient in identifying values of life, the meaning of life, by doing open-questions, e.g., what do you think it should be your tasks in your life? Which are your dreams' life? etc.</li> <li>• Encouraging the patient that 'changing is possible'</li> <li>• Involving the patient in some positive activity, by facilitating the social interaction</li> <li>• Encouraging the patient in communicating SI and/or self-harm thoughts to clinicians</li> <li>• Identifying potential initial agitation and/or anxiety and/or irritability and/or impulsivity</li> </ul>
<b>'Red code' – Severe suicide risk</b>	<ul style="list-style-type: none"> <li>• Positive and recent personal history of SA with active, current and intensive SI</li> <li>• Presence of SI (constant, with high intensity but not criticized by the patient in a credible manner)</li> <li>• Acute depressive episode in MDD, severe severity (not stable, not remitted, with and/or without psychotic symptomatology, e.g., guilt or ruin delusion, with an intense psychomotor agitation, impulsivity, with mixed symptoms, higher introversion levels, with auditory imperative hallucinations of self-harm)</li> </ul>	<ul style="list-style-type: none"> <li>• As for 'green' and 'yellow' code plus</li> <li>• providing a more careful and intense clinical supervision and vigilance (eventually, providing a continuous, 24h monitoring of patient)</li> <li>• evaluating hospitalization</li> </ul>

## Conclusions

The suicide is a highly complex and multifaceted phenomenon in which a large plethora of mechanisms could be variable implicated. Beyond these consideration, modern psychiatry needs a better interpretation of suicide risk with a more careful assessment of suicide risk stratification and planning of clinical and treatment interventions.

## References

(1). WHO. Mental Health Atlas 2017. Geneva: World Health Organization; 2018. Available at: <https://apps.who.int/iris/bitstream/handle/10665/272735/9789241514019-eng.pdf?ua=1>. Accessed June 10, 2019.

(2) Chesney E, Goodwin GM, Fazel S. Risks of all-cause and suicide mortality in mental disorders: a meta-review. World Psychiatry 2014; 13 (2): 153-160.

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