

## Letter to Editor

# Prerequisites for psychiatric examination detecting the intention to commit suicide

Andrzej Brodziak

Institute of Occupational Medicine and Environmental Health, Sosnowiec  
acting Head, proxy: mgr K. Kuźniewski

### Summary

The recent plane crash caused by the pilot increased the interest in the possibility of medical examination, which would be able to detect the intention of committing suicide. The development of such a diagnostic procedure is not only important for the prevention of events in the civil and military aviation, but also due to increase in the incidence of various suicide terrorist acts.

The author expresses his opinion on the nature of such examination, due to his experience of working in Acute Poisoning Treatment Centre. The Centre admits about 1 000 patients per year, who have been rescued after suicide attempts made by the intake of a toxic substance. He discusses the developed scheme of structuralized interview, however, he believes that the ability to detect the existence of suicidal ideation was significantly improved as a result of the formulation of Interpersonal Theory of Suicide, which distinguishes four stages: 1) passive suicidal ideation, 2) suicidal desire, 3) suicidal intent, 4) lethal and near lethal suicide attempts. Next, the author presents his own prediction of the development of methods, enabling the objective detection of “suicidal intent” (plan). In his opinion, such an examination in the future, would be based on brain imaging techniques, which could detect the specific configuration of a person’s brain neural circuits representing the existing plan of suicide. The real ability to detect such a configuration of neural circuits can be predicted on the basis of new, quoted results of neurophysiological studies.

**Keywords:** suicide attempt, suicidal ideation, psychiatric examination, brain imaging study

Known, recent plane crash increased the interest in the possibilities of medical examinations that would be able to detect the intention of committing suicide. The development of such diagnostic procedure is important not only for prevention in civilian

and military aviation, but it is important also by reason of increasing frequency of various acts of suicidal terrorism.

I dare to present here the prerequisites of such examination in conjunction with the personal experience of a clinician working in the Regional Center for Acute Poisonings, which admits people who attempted suicide by taking a toxic substance. We have recently published a scheme of a structuralized interview, which had been used to analyze three categories of people resuscitated after a suicide attempt [1, 2]. Constructing a scheme of this interview we have taken into account the entire knowledge of suicidology.

Borges et al. [3], the authors of a large, multi-center study grouped the risk factors for suicide according to the following scheme: a) sociological and demographic factors, b) psychopathology of parents, c) adverse events in childhood, d) past self-destructive behaviors, e) psychiatric disorders in the recent past.

The ability to check the effectiveness of this scheme by talking with people who attempted suicide, admitted to our center with frequency of approx. 1 000 people per year is, however, useful opportunity.

Our personal experiences lead us to formulate the following recommendations for the detection of an intention to commit suicide.

The essential information is related to data about parents' mental health problems of a considered person. It is necessary to ask if one of the parents had symptoms of disorders such as: depression, anxiety, alcoholism or other addictions, personality disorders. Questions related to the adverse events in childhood, such as: death of a parent, divorce of parents, loss of other significant person (grandmother), domestic violence (physical or sexual abuse), alcoholism in family, criminal behaviour of family members, severe disease in childhood, lack of support in the family (lack of love, rejection), poor parenting patterns.

We also ask whether there were significant negative existential events in their youth and adulthood, such as: serious problems at school or university, unwanted pregnancy, misunderstandings, conflicts in the family, separation, divorce, death of a loved one, long-term loneliness, committing a crime, sudden loss of livelihoods, homelessness, extreme poverty, debt, unstable financial conditions.

Many authors who analyze the causes of suicides emphasize not only the negative factors, but also factors that establish a positive mental condition, i.e. factors, the lack of which makes the situation worse. One of such factors is so called sense of coherence, defined by Aaron Antonovsky.

It seems to us, however, that the protective influence arise also from high libido, curiosity, creativity and commitment to professional or social activity.

The above-mentioned risk factors increase the likelihood of suicide, however, do not specify the situation, when there is already the suicidal intent. Significant progress in the possibilities of recognition of such state arise from the formulation and development of so called Interpersonal Theory of Suicide (ITS) [4, 5].

Van Orden et al. end their paper with a quote from K. Levin, that "There is nothing more practical as a good theory" [4]. Indeed, I think the knowledge of the concepts of ITS establishes a useful practical tool for every psychiatrist and physician, who should

be sensitive to the occurrence of one of the four consecutive stages leading to suicide, namely: passive suicidal ideation, suicidal desire, suicidal intent, lethal or near lethal suicide attempts. Interpersonal Theory of Suicide assumes that many of the risk factors mentioned above are only so called overt, observable factors, which imply or not the existence of three “hidden” but essential determinants of an attempt of suicide. These essential determinants, which start sequence of events leading to suicide are:

1. Thwarted Belonging (~rejection+exclusion);
2. Perceived Burdensomeness (~ I’m useless and only bother others);
3. Acquired Capability for Suicide, which consists of
  - a) Lowered fear of death, and
  - b) Elevated physical pain tolerance.

Understanding the essence of the Thwarted Belonging is crucial for the ability to detect the condition predisposing to suicidal ideation. This hidden, not observable factor is something more than loneliness or social isolation. Van Orden et al. derive the essence of this construct from considerations of Baumeister and Leary [6] who are convinced that the fundamental human need is the “sense of belonging”. They wrote that “people seem to need frequent, affectively pleasant or positive interactions with the same individuals, and they need these interactions to occur in a framework of long-term, stable caring and concern.” In addition, part of this construct is the feeling of a lack of mutual caring relationship, i.e. lack of a natural person, or people who are trying to help. This can be expressed for example by sentences: “There are no people I can turn to in times of need” and “I am not a support for others – no one needs me.”

I want to draw attention, however, to the new possibilities of further development of detection of “suicidal intention.” I am referring to new opportunities that arise from neurophysiological studies.

There is question whether a state of mind, currently considered by the ITS, above referred to as suicide intention, can be demonstrated objectively. The determination of such personal purpose should cause a configuration of the neural circuits representing a devised plan for the implementation of a set of activities. There are already many neurophysiological considerations and models of the imaginary of future and planed activities. I review them in the chapter of my paper entitled “Imagery of Novel Objects Not Yet Perceived, and Planned, and Anticipated Action” [7]. The use of brain imaging techniques to detect the fixed intention of suicide might be relatively easy, because the neural circuits underlying such ideas probably have significant link (so called “connectivity”) between the image of himself, which is done through the centres of autobiographical memory (see the chapter “Image of OneSelf, Sense of Identity, Autobiographical Memory and Self-Awareness”) [7].

The development of brain imaging techniques of neural circuits representing a specific, intense imagery, could be probably within range of abilities of contemporary researchers [7].

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Address: Andrzej Brodziak  
Institute of Occupational Medicine and Environmental Health  
41-200 Sosnowiec, Kościelna Street 13