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Differences between suicide and non-suicidal self-harm behaviours: a literary review

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Summary

The World Health Organization (WHO) states that suicide is one of the 20 most common causes of death – almost 1 million people across the globe die by suicide every year (data from 21 July 2014) [1]. Suicide is one of the most common causes of death among teenagers [2,3]. Another significant but much less known phenomenon is non-suicidal self-injury (self-harm). Despite the fact that we know much less about self-harm than about suicide, research during the past 10 years has indicated that self-harm occurs more frequently in the population of adolescents – whereas suicides affect 10% of teenagers, 7–14% of young people report to have performed a self-harming act at least once in their lives [4]. The most recent international research shows that the frequency of self-destructive behaviours in adolescents is at the level of 24% of the whole population, which might indicate an intensification of this phenomenon [5]. In some cases self-injury takes place with a clear intention of committing an act of suicide, or it can be a self-destructive act which often precedes a suicidal attempt, sometimes long before the final decision to carry it out. Nevertheless, in the majority of cases self-injuary is not performed with the intention of death. Therefore, the following question might be posed: do self-harm acts constitute a separate category of behaviours, or do they inevitably lead to suicidal death? When answering, we ought to take a closer look at both phenomena to have a better understanding of their aetiology, risk factors and frequency, and to understand when they co-occur and when they belong to different categories of self-aggressive behaviours.

suicide / non-suicidal self-injury / auto-aggression

THE SCOPE OF THE PHENOMENON OF SUICIDE

An official state report of the American List [6] enumerates the following risk factors for suicide: previous suicide attempts, mental disorders emerging during the interview (especially depression), history of suicide in the family, child bullying and mistreatment, the feeling of hopelessness, impulsive or aggressive tendencies, barriers in the access to psychiatric treatment, sense of loss, somatic disease, easy access to potentially lethal substances.

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Clearly, mental disorders, especially mood disorders, are important risk factors in suicide: 25–77% of teenagers who attempted suicide had a mood disorder [7]. The most common mood disorder associated with suicide is depression, with 87% of those who died by suicide presenting with symptoms of depression [8]. Another serious risk factor is bipolar disorder. Lopez et al. [9] found that 25–50% of patients with bipolar disorder attempt suicide, whereas Fagiolini et al. [10] found that 29% of those who suffer from affective bipolar disorder attempt suicide. Another factor that increases and sustains suicidal behaviours is long-term life misfortune which cannot be managed and which leads to learned helplessness [11, 12].

The aforementioned factors are reflected in police reports. The Analysis Department of Police

Headquarters in Poland [13], considering the reasons for suicides committed in 2010, established that more than a half (55.6%) out of 4087 suicides was associated with a mental disorder, most frequently mood disorders and particularly depression. Other reasons were family misunderstandings (18.6%), long-term illness (14.3%), economic hardship (13.45%), heartbreak (10.3%), death of a loved one (3.5%), committing an offence (2.1%), school problems (0.6%), contracting AIDS (0.1%), unwanted pregnancy (0.1%).

To summarize, groups at the highest risk of suicide are: (1) individuals with comorbid mental disorders and/or with increased symptoms thereof, (2) people without a diagnosis of mental disorder or with moderately increased symptoms of mental disorders, (3) people with identity disorders and the tendency to perceive the causes of their own problems as being external to them, (4) socially withdrawn individuals with identity disorders and avoidance tendencies, and (5) individuals with depression. The results of this review indicate that suicide risk factors may not entirely reflect the complexity of the clinical state of a person attempting suicide. Furthermore, cluster analyses suggest that such attempts might also be undertaken by individuals without mental disorders. The most pronounced psychological characteristics, among others, are the tendency to avoid contact with the stressor and the tendency to externalize in the case of individuals with identity disorders.

In the light of a number of methodological limitations, it is necessary to validate the results of this analysis in research which would be conducted on a representative and well-characterized group.

The data analysis yields factors which increase the risk of suicide for an individual. However, we are still lacking research on how and why these factors facilitate self-harm and self-destructive behaviours and such research is recommended. Realizing which risk factors contribute to an increased probability of different components of self-destructive behaviours would help in understanding and preventing this phenomenon.

Does suicide result from self-harm behaviours?

Commonly known self-injury is associated with an alarming behaviour and suicide attempt. Cross-sectional studies indicate that those behaviours are closely correlated and often co-occurring. Young people who harm themselves are more likely to attempt suicide [14]: 70% of teenagers with self-harm behaviour reported at least one suicide attempt, whereas 55% reported multiple suicide attempts. Longitudinal studies show [15] that non-suicidal self-harm behaviour occurs before the suicide attempt in a group of teenagers who had already attempted suicide, rather than in a group who had only thought about suicide, but without an actual attempt [16,17]. Similar conclusions were drawn by Whitlock [18], who was investigating the temporal relationship between self-injury and suicidal behaviours. He demonstrated that self-injuring teenagers present a three times greater risk of suicidal thoughts or attempts. One of the strongest factors influencing a suicide attempt are self-harm acts 6 months earlier [19]. Cooper et al. [20] have shown that self-harm behaviours frequently lead to suicide attempts, even if initially there is no death intent.

A study of a group of teenagers engaged in acts of self-harm revealed similar indicators of mental disorders [21], including elevated major depressive disorder factors (41.6%), post-traumatic stress disorder (PTSD) factor (23.6%), elevated destructive behaviour diseases (e.g. oppositional defiant disorder 44.9%), and the use of substances – e.g. alcohol abuse (18.01%) and alcohol addiction (16.8%), cannabis abuse (12.6%) and cannabis addiction (29.5%). Apart from the formal psychiatric diagnoses, some research suggests unique psychosocial risk factors of suicidal and non-suicidal self-harm behaviours. For instance, Wilkinson et al. [19] noted that, in female teenagers taking part in the Antidepressants and Psychotherapy Trial (ADAPT) study, self-injury was inseparably linked with the occurrence of anxiety disorders in early adolescence, whereas suicides were inseparably associated with family malfunctions. In this study, suicides and non-suicidal self-harm behaviours preceded by non-suicidal self-injury were compared and it emerged that suicides are significantly associated with self-injury. Other studies indicated [38] that psychosocial risk factors might include idealized suicides, a sense of hopelessness, impulsivity, and child abuse.

Joiner [21] claims that the capacity for suicide is a result of low fear and increased tolerance to

pain, which often appear after some painful experience, such as previous trauma or self-harming. The relationship between self-harm and suicidal behaviour has been established, as well as the influence of low tolerance of stressful situations and previous suicide attempts on recurring self-harm episodes [22]. From the neuropsychological perspective, auto-aggressive behaviours are also considered as resulting from attempts to suppress negative emotions, such as anger, fear, anxiety, exasperation or sadness [23].

People with chronic self-harm repeat these acts because they have learned to shed negative emotions by means of auto-aggressive behaviours. They develop a sort of resistance to self-harm, therefore the effectiveness of the emotional discharge is decreasing. It forces them to inflict more and more pain to achieve the desired effect of discharge [23].

Research to date is not sufficient enough to establish the indicators when non-suicidal self-harming behaviours result in suicide. However, we know that auto-aggressive episodes are the strongest risk factor of death by suicide in teenagers [24]. Therefore, it is another proof that it is necessary to take a closer look at the non-suicidal auto-aggressive behaviour.

Differences between non-suicidal auto-aggressive behaviours and suicide

Some researches suggest that suicide and self-harm constitute two separate categories of behaviour. Non-suicidal self-destructive episodes need to be distinguished from self-destructive episodes (auto-aggression). The latter are broader phenomena that concern two aspects: non-suicidal behaviours directing aggression at the person performing the act, and suicide attempts with death intent. Non-suicidal auto-aggressive behaviours are associated with a greater risk of suicide attempts [19], although these two acts have a different quality and aetiology. Non-suicidal auto-aggressive behaviours might be defined as actions which are aimed at inflicting pain and wounds on one's own body that are not supposed to lead to death; they are committed without an intention of dying, serving different purposes, for example, reducing the stress level. This phenomenon affects 15–28% of young people [25-28] and it emerges on average in teenagers between the ages of 12 and 14 [29-31].

The basic factor differentiating non-suicidal auto-aggression from suicidal behaviours is the intention of death, with the willingness to inflict pain, and the type and frequency of the methods used. Individuals with non-suicidal auto-aggressive behaviours want to cause pain to themselves without leading to death, e.g. by multiple self-harming of the body, for example cutting. Non-suicidal aggression might be expressed by a number of low-mortality methods [32]. Conversely, suicide attempts are supposed to lead to death in the least painful way possible. Suicide attempts are preceded by periods of intensified thoughts about death and planning it, most commonly by means of one high-mortality method. The difficulty in diagnosing which type of behaviour we are dealing with might result from a lack of control over auto-aggression. It is not always possible to predict the course of action in the case of auto-aggressive behaviour, which involves death risk but where death is not the intention of the individual. Kumar and colleagues [33] claimed that 88% of young people who took part in their study reported that their self-harm behaviours were wrongly diagnosed as suicide attempts. This phenomenon was illustrated by Nock & Kessler [34]. The US National Comorbidity Study [35] showed that the frequency of diagnosing auto-aggressive behaviours as suicide attempts in the USA has decreased from 4.6% to 2.7%, with willingness to die as a criterion for diagnosing suicide attempts.

There exists vast research concerning the epidemiology of suicidal behaviours. The notion of occurrence and persistence of suicidal behaviours as well as their risk factors have been extensively studied. There is a great necessity to obtain similar data about auto-aggressive behaviours. Such information will be useful from the scientific point of view, in order to understand suicidal behaviours in two aspects: medical and legal. From the medical standpoint the data will help to identify and treat suicidal behaviours, whereas from the legal perspective they will help to plan and distribute preventive and intervention materials.

CONCLUSIONS

As has been demonstrated, there is a significant body of research concerning suicide, but future work is needed in order to obtain similar data on non-suicidal auto-aggressive behaviours. Although the problem of auto-aggression and self-harm has existed for thousands of years, systematic research in this area has appeared only in the past few decades. As a result, we still do not have any longitudinal or large-scale data on the topic of non-suicidal self-aggressive behaviours. Furthermore, most of the research is focused on adults, therefore we do not know much about the epidemiology of auto-aggression in children and teenagers. Considering the apparent growth of auto-aggression among teenagers, there is great necessity to address this research gap. Studies such as the National Comorbidity Survey Replication-Adolescent Supplement [36] might be a starting point for more intensive research.

Collecting more data concerning the relationship between risk factors and actual effects of auto-aggression seems indispensable. An analysis should be conducted in order to better understand which risk factor has the biggest influence on the occurrence of auto-aggression in particular types of individuals [37,38]. Obtaining such information is important for scientific understanding, but also in order to predict and prevent such behaviours. In what way does depression lead to suicidal thoughts? In what way disorders such as PTSD, behaviour disorders or substance abuse lead to suicide attempts? If we find out that a particular substance influences the disorders associated with suicide attempts owing to increased aggression, it would suggest an increased amount of work on the notion of aggression in order to reduce the risk of suicide attempts, rather than an attempt to limit substance use. If we learn what the reasons for self-harming are, we will be able to identify the risk groups with more precision and apply a more effective therapy.

What is also important is to take a closer look at the interactions between risk factors of auto-aggression. As it was demonstrated before, suicides and non-suicidal auto-aggressive behaviours can have many causes and many outcomes, which probably arise from a complex interaction between a number of factors. Research conducted so far has measured the linear relationship between two variables: an individual factor and auto-aggression. A greater number of individual factors better predicts auto-aggression in advance (e.g. the majority of individuals who die as a result of suicide are men with mental disorders, however, the majority of men with mental disorders do not die by suicide). Therefore, we recommend research be conducted that would take into account a plethora of complex, co-occurring risk factors.

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