

Self-mutilating behaviours in patients with mental disorders – a study on users of a social networking service

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Summary

Aim. This work is aimed at gaining extended knowledge of self-destructive behaviours. Users of a social networking service devoted to people with mental disorders took part in the study.

Method. The study was carried out as a voluntary web questionnaire based on clinical experience of researchers and literature. Results were summed up using standard method of descriptive statistics.

Results. 202 users of the web portal psychiatrically identified with various mental disorders participated in the study (information derived from responses given in the questionnaire). Patients afflicted by bipolar disorder and recurrent depressive disorders (72.7%) constituted the biggest group. Those previously thinking of self-harm have done it nine times more frequently, the majority under 20 years of age. These behaviours included self-mutilations (56.4%) and deliberate self-poisoning (53.5%). The biggest group of patients who declared self-harm in the past were afflicted by mood disorders (BD – 77.3%, RDD – 71.2%); however, the difference is not statistically significant. Such behaviours were reported 2.5 times more frequently ($p < 0.05$) by patients with identified co-occurrence of personality disorders. Thoughts of self-harm appeared not only in full-blown episodes. Regardless of the identified mental disorder, self-harming behaviours were accompanied by despondency and resignation. Approximately 10% of respondents talked about their self-harming behaviours with a psychiatrist and a psychotherapist, i.e. 1.5 times more frequently than with other people from their surroundings. Suicide attempts and completed suicides occurred much more frequently within surveyed families than in the general population.

Conclusions. Self-mutilations occur mostly in patients suffering from various affective disorders. In spite of obvious restrictions of this study method, a web portal may be an effective way to collect data, for it provides fully anonymous responses.

Key words: self-mutilation, mental disorders, Internet forum for patients

Introduction

The term self-aggression (self-destruction) refers to a complex group of behaviours. One of the definitions that had been put forward, states that “all voluntary, intentional and more or less deliberate behaviours jeopardising one’s health or life” should be regarded as self-harming [1]. Two main groups of this kind of behaviour i.e. self-injury or self-poisoning (medications or other substances) can occur over the course of mental disorders. Favazza [2] distinguishes three groups of self-mutilation:

- I major (amputation of limbs or castration etc.) – it is the least common self-mutilation, it is followed by severe consequences for life and health, it is usually inflicted upon the self while in an acute alcohol intoxication or a psychosis;
- II stereotypic (rhythmically banging one’s head against the wall etc.) – relatively rare, mostly accompany autism, mental retardation and psychoses;
- III moderate/superficial/delicate self-mutilation – Pao described it for the first time in 1969 [3] It is the most common self-mutilation. It is usually superficial and does not require medical interference.

A suicidal intent is often attributed to people who self-harm; therefore, self-mutilation is being treated as a subtype of a suicidal behaviour. Until 1938 an indisputable belief that self-mutilation is one of self-destructive behaviours called “behaviours aimed at self-destruction” prevailed in public opinion as well as in researchers’ opinion. Suicide is also included in this category. In his work “Man against himself”, published in 1938, Karl Menninger distinguished between a suicide and self-mutilation for the first time by applying to the latter terms focal suicide and partial suicide. The same researcher claimed that “local self-destruction is a form of partial suicide to avert total suicide” [2]. Back then, it was unthinkable to view self-injuries as an attempt to endure by directing suicidal impulse on a part of the body rather than on the whole self. As Favazza described it “Menninger was ahead of his times.” Today a vast majority of researchers agree that there is an obvious difference between a suicide attempt and moderate self-mutilation: one, by attempting suicide, intends to kill him/herself, whereas such an intent does not occur in self-mutilation [4–6]. Walsh and Rosen support clear distinction between a suicide and self-injury and they suggest considering four dimensions of these phenomena, i.e. intention of self-injury, physical injury resulting from mutilation, frequency and recurrence of a behaviour, methods chosen to inflict self-mutilation. They indicated that an act’s intentionality does not constitute a criterion clearly distinguishing self-mutilation from a suicide, for it may be “unconscious, preconscious or mixed up with a stream of hopelessness” [7, 8].

The term anti-suicide was introduced in the mid-1970s. It had been observed that self-mutilation often serves as means to dispose of a feeling of depersonalisation and deadness helping the concerned person to regain a sense of being alive [9]. Perceiving self-mutilation as anti-suicide, G. Babiker and L. Arnold claim that “people mutilating themselves manifest in a way a contrary (to self-annihilation) inclination of nature. They try to protect themselves. Self-mutilation helps them not to fall into pieces, to fight for survival (...)” [3, 10, 11].

A deliberate overdose of medication or other substance also poses a serious clinical problem, for it may lead to chronic health problems (e.g. drug induced liver injury) or be the cause of death [12, 13]. Studies carried out in one of the Polish centres for toxicology showed that the number of patients with mental disorders who took substances to commit suicide rose over a six-year observation period. These were mostly medications that were accessible during pharmacological treatment of mental disorders [14, 15].

Many studies on suicides can be found in psychiatric literature. However, there is definitely less information devoted to acts of self-harm that do not result in death [12]. Among professionals self-mutilation arouse fear and uncertainty [6]. Self-harming behaviours are a topic that generally triggers distaste, fear and has a rather pejorative undertone. It is associated with ugliness, blood, scars and, as some studies prove, they cause dislike even in people professionally trained to assist patients, i.e. doctors, psychiatrists, psychologists and therapists. Among others, Smith proved in his research that patients inflicting self-mutilation are perceived negatively by psychiatrists and other medical personnel [16].

Over the last few years, an alarming rise in the number of (moderate) self-mutilations has been noted, especially among the youth. In Great Britain this phenomenon has grown to such an extent that an internet organisation (National Self-Harm Network 1) was created. It aims at increasing the social understanding for self-mutilation, as well as, organising support groups for families and other people related to self-mutilating people [17].

In Poland, the topic of self-mutilation and self-poisoning is often a taboo subject. Many people who do not cope with self-mutilation seek for help outside the doctors' offices. Internet forums constitute a platform where people thinking of self-injuries and self-harming, are less afraid of negative perception and criticism from others. It is there that we can read numerous stories of people who had been seeking help, but instead had to face a dramatic lack of understanding and, as a result, were being sent from one specialist to another, which caused them to give up on any search for help whatsoever.

The results of this study are based on information from people using the Internet, which is often the primary source of information on every aspect of daily life, including knowledge about medical issues. The current level of development of the Internet allows users to participate actively in the generation of content present in the web [18]. A medical social networking service TacyJakJa.pl is one of the Polish message

boards. It is led by doctors and devoted to problems of people with chronic diseases, including mental disorders. In Anglo-Saxon countries it is known as GSMP (Guided Self Management Program for Patients). The idea behind this project is to train a patient in self-observation of their own state between appointments with a specialist. In order to achieve that, the social networking service licenses clinical self-evaluation scales in various nosological entities or offers questionnaires designed by medical consultants (e-diary) useful in an evaluation of dynamics and course of change in a long perspective [19]. Based on systematically accumulated knowledge on portal there are created scientific reports in the form of papers or conference posters. The works presented on the web portal TacyJakJa are based on anonymous data of portal participants and involve many diseases, including depression and bipolar disorder, MS, epilepsy and asthma [20].

Aim

The following work is aimed at extending knowledge of self-harming behaviours among people with mental disorders, who are users of the social networking service for patients.

Main research questions were as follows:

1. Was the frequency of self-harming thoughts and behaviours different among men and women?
2. Was self-mutilating behaviour more frequent among those people who had thought of it more frequently?
3. What kinds of self-harm dominated in the participants?
4. Did the kind of mental disorder influence the frequency of self-harming behaviours?
5. Did the self-harming behaviours have any association with intensification of other psychopathological symptoms?
6. Did the people, who thought of self-mutilation, discuss it with other people, including their psychiatrist?
7. Is there a link between frequency of self-harming behaviours within a family and such behaviours in participants of the research?

Methods

The study was carried out as a voluntary online questionnaire, accessible on the social networking portal. It should be stressed that the voluntary nature of the survey, as in other works based on health data from the internet, it is a matter of convention. This is because the questionnaire was filled by people for whom the issue of self-harm is not neutral. Containing open and closed questions, the questionnaire was placed in a column dedicated to mental disorders. Those who answered the questions could freely mark various types of their self-harming behaviours from the past, so that the discussed phenomenon could be better researched. Questions were based on the clinical

experience of researchers and literature on the subject [2, 4–8]. Results were summed up using standard methods of descriptive statistics; significance of associations between analysed variables was checked by means of tests of independence – chi-squared test. 95% of exact confidence interval was given for the odds ratio. The p -value < 0.05 was accepted as statistically significant. Data was analysed using the SPSS Statistics software package.

202 patients having been previously identified with various mental disorders by a psychiatrist took part in the study (according to the respondents). Women constitute the majority of the respondents (73.3%). Participants were aged between 15 and 64 years (the mean age – 33 years). The majority of them indicated they had higher (49%) and secondary (48.5%) education. Most of the participants (59%) were inhabitants of a city with population over 100,000 inhabitants. 19% of them lived in towns having between 30,000 to 100,000 inhabitants. Half of the respondents were single, 41% were married or in partnership. 44% of them were employed, 23% were pupils or students. 13% of the respondents were pensioners or annuitants, 12% were unemployed. 8% of respondents were financially dependent.

The biggest group among the participants constituted those diagnosed with affective disorders. The women who participated in the study were statistically more often afflicted by bipolar disorder (BD) and recurrent depressive disorder (RDD) than by paranoid schizophrenia and schizoaffective disorders ($\chi^2(3) = 19.1$; $p < 0.0001$).

Table 1 presents detailed diagnoses depending on the respondent's sex.

Table 1. **Psychiatric identifications depending on the respondent's sex**

Diagnosis	Sex		Total
	Women	Men	
Paranoid schizophrenia and schizoaffective disorders	7.4%	29.6%	13.4%
Recurrent depressive disorders	33.1%	18.5%	29.1%
Bipolar disorder	46.6%	35.2%	43.6%
Other identifications (mainly anxiety disorders)	12.8%	16.7%	13.9%

Personality disorders (45%) were the most frequent co-occurring disorders diagnosed by a psychiatrist in charge in a case of the surveyed group. 29.2% of respondents declared that they had been diagnosed with borderline personality disorders. In a similar number of women and men a co-occurrence of emotionally unstable personality disorder (28.3% in women and 31.5% in men) was identified. Other mental disorders were declared by 11 (7.4%) women and 7 (12.9%) men. (Table 2).

Table 2. **Co-occurrence of mental disorders among the participants**

Co-occurring mental disorders	Sex		Total
	Women	Men	
Borderline personality disorder	28.3%	31.5%	29.2%

table continued on the next page

Personality disorders other than borderline	15.5%	16.6%	15.8%
Other disorders	7.4%	12.9%	8.9%

The biggest group (64%) was constituted by people who have been afflicted by the disease over the last 10 years (0–5 years: 33.2%; 6–10: 30.8%). Little more than one quarter of patients have been afflicted for 11 to 20 years. People afflicted for over 20 years constituted the smallest group (10.9%).

Results

Little more than 60% of respondents thought of self-harm in the past, 73.3% self-harmed. Women reported they had thought of self-harm more frequently, but differences are not statistically significant (OR = 1.8; 95% CI 0.95–3.4; $p < 0.0001$). Women self-harmed 2.5 times more often than men. (OR = 2.5; 95% CI 1.3–4.9; $p < 0.0001$) (Table 3).

Table 3. Differences in frequency of self-harming behaviours depending on the respondent's sex

Self-harming behaviour(s)	Sex		Total
	Women	Men	
Yes	78.4%	59.3%	73.3%
No	21.6%	40.7%	26.7%

People who had previously thought of self-harm, much more often decided to do it (OR = 8.8; 95% CI 4.3–18.2; $p < 0.00001$) (Table 4).

Table 4. Dependency between thoughts and acts of self-harm

Thoughts of self-harm	An act of self-harm		Total
	yes	no	
yes	73.6%	24.1%	60.4%
no	26.4%	75.9%	39.6%

The majority of participants self-harmed for the first time before age of 40 (95%), and 63% before age of 20.

The majority of respondents reported to have completed one of the forms of self-harm in the past (percentage does not sum up, for participants could have marked several forms of self-harming behaviours). More than a half of them (53.5%) admitted they took a substance in the past in order to poison themselves. Few more people (56.4%) reported to have self-mutilated in the past. Women self-harmed more often than men in both ways, but the difference is statistically significant in both cases – in case of medicine/poisonous substances overdose (OR = 2.3; 95% CI 1.4–3.8; $p = 0.001$),

and in case of various forms of self-mutilation (OR = 1.9; 95% CI 1.2–3; $p = 0.007$). Table 5 presents forms of self-harm depending on the respondent's sex.

Table 5. Forms of self-harming behaviours with a general division into medication /a poisonous substance overdose and various forms of self-harm depending on the respondent's sex

	YES	Women	Men
Deliberate medication or a poisonous substance overdose	108(53.5%)	90 (61.0%)	18 (33.0%)
Various types of self-harm	114(56.4%)	92 (62.0%)	22 (41.0%)

Detailed types and prevalence of self-harming behaviours in the surveyed group is presented in table 6.

Table 6. Types and frequency of self-harming behaviours among participants

Types of self-harming behaviours among participants (%)				
Self-mutilation		Substance poisoning		Other types (e.g. self – starvation)
Cutting	51.0%	Deliberate medication overdose	51.0%	34.0%
Deliberate burns	14.4%	Poisonous substance overdose	9.4%	
Jumping from a height	7.9%			
Drowning	6.4%			
Suffocation	10.9%			

The respondents were also asked about the intention of their self-harming. Suicidal death was to be a result of ingestion of medicine or other poisonous substances in 51.3% of participants, and other self-mutilating behaviours were supposed to result in death in 24.4% of respondents. Nearly 70% of those, who self-harmed felt a temporary relief.

A relation between a diagnosis and an act of self-harm is not statistically significant ($\chi^2(3) = 2.4$; $p = 0.5$), but acts of self-harm were mostly done by respondents diagnosed with affective disorders (BD – 77.3%, RDD – 71.2%) (Figure 1).

Patients diagnosed with co-occurrence of personality disorders self-harmed 2.5 times more often (OR = 2.5; 95% CI 1.2–5.6; $p = 0.018$). It is not so significant in other co-occurring personality disorders (OR = 1.7; 95% CI = 0.7–4.4; $p = 0.3$). It is similar in other co-occurring mental disorders (OR = 1.3; 95% CI = 0.4–4.2; $p = 0.7$).

The surveyed people reported that they thought of self-harm not only in full-blown episodes of disorder. Over half of them (54%) had such thoughts in periods without intensive psychopathological symptoms necessary to fulfil the criteria for a psychiatrist to identify an episode. Regardless of previous identification, all people who thought of self-harm, felt depressed and resigned at the same time.

One quarter of the surveyed people admitted to have talked about their problem with someone else, when asked an open question. They talked mostly to a psychia-

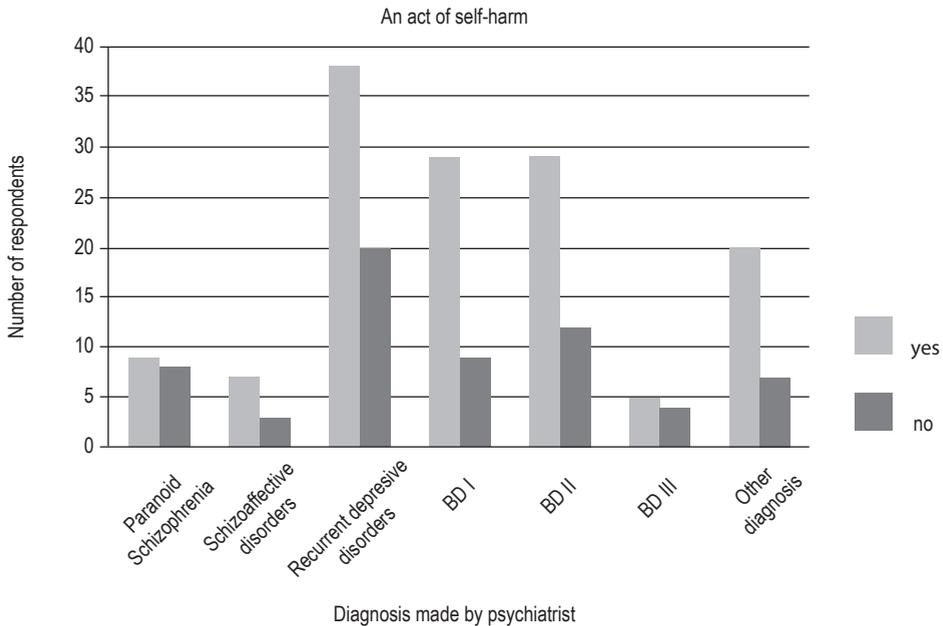


Figure 1. Dependency between identified mental disorders and self-harming behaviours (no statistic significance)

trist or a psychotherapist (8.9%), then to a friend (5.9%) and siblings (5.4%). 4.4% of participants talked about self-harm with their partners.

In 12.9% of immediate families (parents, siblings) of the respondents, there was an incidence of self-harming behaviours other than suicide attempts. In 18.3% of them there was a suicide attempt. The incidence of a fatal suicide in immediate and extended families occurred in 19.3% of participants.

Discussion

As it was mentioned above, many studies in literature on the subject were devoted to suicides, but there is still little information on self-harming behaviour not resulting in death. The results of this study the need to be discussed in the context of classical reports, i.e. not based on questionnaires completed online. There is one reason for this solution – the phenomenon of self-aggression has not been studied in this way, although in non-psychiatric medical fields such methodology is becoming increasingly popular. For example interesting research on asthma in children and an influence of diagnosis of MS on relationships in the workplace [21, 22]. In both of these works the authors suggest that, despite the obvious limitations of this method of obtaining data, studies of this type can become an inspiration to plan controlled studies beyond the Internet.

The discussion on risk factors of these two clinical phenomena is in progress. Some authors claim that various forms of self-mutilation and self-poisoning are a strong predictor of suicidal death, whereas others profess the opposite. US epidemiological research indicates there are about 25 suicide attempts for every suicide death, and an estimated number of people in a not psychiatrically treated population who at least once in life harmed their bodies amounts to about 4% of adults and 11–39% of youth. This percentage is even higher among psychiatric patients: 21% in adults and 40–69% in adolescents [1, 12, 23, 24]. Values similar to estimated data for young people were achieved by the questioned users of the social networking service. It might have been influenced by the fact that an average respondent was 33 years old. According to Babiker and Arnold, self-mutilation is perceived as a problem of youth and adults up to approximately 35 years of age [6]. However, lack of data on occurrence of the phenomenon in adults over 35 should not be treated as an evidence of its spontaneous withdrawal. Studies on psychiatric patients indicate that frequency of inflicting self-mutilation grows rapidly between 18 to 24 years of age and remains on a stable level up to 50–59 years of age [25]. In contrast, the results of the Australian study published in 2011 by Lancet suggests that the tendency to self-mutilation passes at the age of early adulthood (up to 29 years). The researchers suggest that perhaps it is associated with aging of prefrontal cortex in this period, which is responsible for dealing with emotions and solving problems [26]. Surveyed people, who thought of acting in a self-harming way in the past, have done it nine times more frequently. There is also a considerable group of people (26.4%) who admitted to have inflicted self-harm on an impulse.

The majority of the participants declared to have used a form of self-harm in the past. Over a half of participants admitted that they had taken a substance to poison themselves in the past. A comparable, though somewhat higher number of participants, admitted to have inflicted self-mutilation in the past. These results are higher than that of the general population, which only for self-mutilations are approximately 30% [27, 28].

It might have most likely been influenced by the way of gathering data through the web portal for mentally disordered people. In the introduced study, there were statistically significant differences depending on the respondents' sex. Women overdosed on medicines 2.3 times more often than men and self-mutilated nearly two times more frequently. Data from only self-mutilation-related studies indicate that an estimated proportion of women compared to men amounts to 2:1 to 20:1, whereas suicide attempts undertaken by men, considerably more often resulted in death. [2, 3, 9].

Participants of the study mostly cut, deliberately burn and strangle themselves. These forms of self-mutilation were also mentioned in another Polish study carried out in a health centre in Lodz, although in this study intentional burns were specified as “singes” [29].

Over a half of the respondents have intentionally overdosed on medicines in the past. Almost every tenth person has taken other poisonous substances. Medicines

and other poisonous substances were to result in suicidal death in 51.3% of the respondents vs. 24.4% in case of self-mutilation. A study carried out in Great Britain in 2012 indicates a high risk of a suicide resulting in death in people who have already intentionally self-poisoned or self-mutilated in the past (5 – vs. 1.8 – times higher risk) compared to people who have not [30]. These proportions are comparable among a group of surveyed people.

Almost 70% of people who have self-harmed, felt a momentary relief. A comparable result (75%) was achieved in another study, in which relief was described as a “reduction of emotional tension” [29]. Clinical practice suggests that self-mutilation may be of habitual nature aiming at reduction of mental tension and patients thoughts concentrate on doing something that had already led to an immediate reduction of this tension.

Various kinds of self-harm apply more often to people mentally disordered than those who are not afflicted by it. In this study, 86% of patients had some kind of a mental disorder previously diagnosed by a psychiatrist. It is a percentage comparable to results achieved in other studies [12, 31]. American data suggest that self-mutilation and intentional self-poisoning were mostly done by people afflicted by affective disorder and a broad spectrum of social maladjustments. In the studied population a dependency between diagnosis and an inflicted self-harm is not statistically significant ($\chi^2(3) = 2.4$; $p = 0.5$), but self-mutilation was done mostly by people diagnosed with affective disorders (BD – 77.3%, RDD – 71.2%). It seems to be extremely interesting whether tattooing and other invasive forms of body enhancement (piercing and scarification) may be related to the tendency to self-harm. A Polish study carried out in a health centre in Lodz indicates that people who have self-mutilated at least once had more invasive body enhancements apart from a tattoo. The authors conclude that self-mutilations and above mentioned forms of body enhancement play a different role in people making them [29]. In the presented group, 27 respondents had a tattoo (13.4%) and 35 had piercings (17.3%). No significant dependency between having a tattoo or piercing and thinking of self-harm was observed.

In clinical practice, mental disorders pose a serious clinical problem, they require from a psychiatrist a wider perspective and a complex therapy based on psychotherapy. The majority of studies indicate that self-mutilation and self-poisoning are inflicted more often by people with mental disorders, mostly borderline personality [12, 25, 31]. In the presented study people diagnosed with borderline personality acted in a self-harming way 2.5 times more often. By other accompanying mental disorders, this relationship was not so significant (OR = 1.7; 95% CI = 0.7–4.4; $p = 0.3$). Such a result is not surprising because according to ICD-10 self-mutilations are one of the symptoms described in emotionally unstable personality disorder borderline type [32].

Surveyed people reported that they thought of self-harm not only in full-blown episodes of their mental disorder. Over a half of participants (54%) thought of it in periods lacking intensive psychopathological symptoms necessary to fulfil the criteria

for a psychiatrist to identify an episode. However, all the people who thought of self-harm, felt depressed and resigned at the same time. Such respondents' reports should raise psychotherapists' and psychiatrists' awareness that self-harming behaviour may arise for most of the time when a mental disorder is accompanied by variously intensified symptoms.

The answer "I did not cope at all" was the most frequently given one on the open question about ways of coping with thoughts of self-harm. Only one in four respondents discussed it with someone. Less than 10% of participants reported to have talked about this mostly with a psychiatrist or a psychotherapist. They discussed it with their close relatives and friends much more seldom. Such a result in relation to relatives and friends may mean that self-mutilation is a taboo subject. In 2012, an epidemiological study on mental condition of Poles was published. It proved that we talk about personal problems mainly with our families and friends [33]. In specialist literature, there are many descriptions of emotional states of people looking after those who talk about their self-harming behaviours. Professionals admit that they feel helpless, terrified, guilty, angry, disgusted and sad [6]. Perhaps people afflicted by this problem can see and sense these emotions while talking to a psychologist or a psychiatrist.

One of the factors of a completed suicide is the existence of such a behaviour in the family, especially in the family of origin [34, 35]. There are at least two reasons of this – similar mental disorders (e.g. severe depression) or ways of solving difficult situations. Among next of kin (parents, siblings) of the surveyed people the incidence of self-harming behaviours other than suicide attempts was 12.9%, and that of suicide attempt was 18.3%. The incidence of a completed suicide occurred both in immediate and extended families in 19.3% of respondents. No dependency between a family history and thoughts of self-harm was observed, but numbers do not allow for generalisation. It is worth emphasising that in general population of Poland suicide attempts are estimated at 0.7%. According to this data suicides resulting in death make up $\frac{3}{4}$ of all suicide attempts, yet, as it was mentioned before, this data might be unreliable, as in world literature it is emphasised that there is at least one suicide completion for at least 25 suicide attempts [12, 33, 36].

Gathering data in a social network imposes certain limitations on the study. On the one hand, as it was mentioned many times before, it provides full anonymity, on the other hand it makes it completely impossible to verify data. All information on identified mental and personality disorders come only from patients. Nevertheless, authors think that this data will allow to gain general awareness of problems linked to self-mutilations in the group of people with probable mental disorders.

Conclusion

1. The study has shown that self-mutilations appeared mostly in patients with disorders from a wide spectrum of affective disorders.

2. Self-harm is usually preceded by thinking of it, and is accompanied by feelings of despondency and resignation regardless of diagnosed mental disorders and intensification of other symptoms.
3. It is necessary to carry out further studies on larger groups, and as a result to develop relevant ways of helping people afflicted by the problem.
4. A web portal may be a good way to collect data, for it provides anonymous entries.

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