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The analysis of family risk factors associated with the occurrence of suicidal attempts among girls aged 12–16 years old. A pilot study

Analiza rodzinnych czynników ryzyka występowania prób samobójczych w grupie dziewcząt w wieku 12–16 lat. Badania pilotażowe

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Abstract

Objective: The analysis of family risk factors associated with the occurrence of suicidal attempts and self-mutilation in girls aged 12–16 years old. **Material and method:** The participants of this study consisted of 34 girls aged 12–16 years old, hospitalized in the Department of Paediatrics of the Medical University (Klinika Pediatrii UM) in Lublin due to suicidal attempts. Fifty-five percent of the participants came from complete families, 20% were brought up by mothers only, 20% declared their parents to be divorced. The majority of the girls (76%) were hospitalized due to medication overdose, 8% due to medication overdose and vein cutting, and 5% due to medication and alcohol overdose. The participants were presented with a complementary metric survey, and guided interviews were carried out with them. **Results:** A positive relationship between the number of self-mutilation acts and the number of suicidal attempts has been shown. The greatest number of suicidal attempts has been observed in the group of girls whose parents were divorced. Such a relationship has not been observed in the case of self-mutilation acts. A positive correlation has been observed between the feeling of isolation and the number of self-mutilation acts and suicidal attempts. The increase in the number of family rows was indicative of the increase in the number of self-mutilation acts. The feeling of being rejected by the family was positively related to the number of suicidal attempts. **Conclusions:** Adolescent girls with a tendency towards suicidal behaviours are simultaneously prone to self-destructive behaviours. Parental relationships affect the girls' functioning, with the risk of suicidal attempts being higher in the group of girls whose parents are divorced. The risk of suicidal attempts and self-mutilation acts increases with the feeling of isolation in teenage girls.

Key words: suicidal attempts, risk behaviour, adolescence

Streszczenie

Cel: Analiza rodzinnych czynników ryzyka występowania prób samobójczych i samouszkodzeń u dziewcząt w wieku 12–16 lat. **Materiał i metoda:** Grupa badana obejmowała 34 dziewczęta w wieku 12–16 lat hospitalizowane w Klinice Pediatrii Uniwersytetu Medycznego w Lublinie z powodu próby samobójczej. Pięćdziesiąt pięć procent badanych pochodziło z rodzin pełnych, 20% wychowywała matka, a u 20% rodzice byli po rozwodzie. Najwięcej dziewcząt hospitalizowano z powodu przedawkowania leków (76%), 8% z powodu przedawkowania leków oraz podcięcia żył, a 5% z powodu przedawkowania leków i alkoholu. Badanym przedstawiono ankietę autorską, metryczkową oraz przeprowadzono z nimi wywiad ukierunkowany. **Wyniki:** Stwierdzono dodatnią zależność między liczbą samookaleceń a liczbą prób samobójczych. Wykazano, że największej prób samobójczych wystąpiło w grupie dziewcząt, których rodzice byli po rozwodzie. Nie odnotowano takiej zależności w odniesieniu do samookaleceń. Zaobserwowano dodatnią korelację między poczuciem osamotnienia a liczbą samookaleceń i prób samobójczych. Wraz ze wzrostem awantur domowych wzrastała liczba samookaleceń. Poczucie odrzucenia ze strony rodziny wpływało dodatkowo na liczbę prób samobójczych. **Wnioski:** Dziewczęta w wieku dorastania z tendencją do zachowań samobójczych są jednocześnie podatne na zachowania autodestrukcyjne. Relacje rodziców wpływają na ich funkcjonowanie – ryzyko wystąpienia prób samobójczych jest wyższe w grupie dziewcząt, których rodzice są po rozwodzie. Ryzyko prób samobójczych oraz samookaleceń zwiększa się wraz z poczuciem osamotnienia dziewcząt.

Słowa kluczowe: próby samobójcze, zachowania ryzykowne, adolescencja

INTRODUCTION

Over the last decade, there has been a considerable increase in the tendency towards self-destructive and suicidal behaviours among youth. According to the police statistics, the number of suicidal attempts among women steadily increases every year (www.policja.pl, 2015). It seems, however, that the presented police data do not fully reflect the reality. It is probable that a substantial number of unsuccessful suicidal attempts is not reported, which grossly distorts the statistical data (Makara-Studzińska, 2001). Many authors undertake the task of gaining insight both into the motives and the social mechanisms underlying the suicidal attempt. All researchers are in agreement that any suicidal attempt is in contradiction to the life instinct, and is a form of crying out for help or rebellion against the surrounding world, but, above all, it is a complex and ambiguous phenomenon (Holyst, 1983, 1996).

The causes of self-destructive and suicidal behaviours in teenagers most often include: genetic factors, family modelling, depression and other mental disorders, psychoactive substance abuse, peer and domestic violence, pathological and inconsistent functioning within a family, demographic and personality factors (Brent, 1987, 2009; Burke *et al.*, 2010; Kuberska-Przekwas, 2014; Makara-Studzińska, 2011). What is disturbing is the fact that suicidal attempts tend to concern younger and younger children (Glowinski *et al.*, 2001; Whalen *et al.*, 2015). This occurrence becomes more widespread, as the Internet access becomes easier, heightening the risk of experiencing virtual violence considered to be one of the more serious risk factors (Brunstein Klomek *et al.*, 2010). The aim of the following analysis is to shed light on the psychological functioning of girls hospitalized due to the first or subsequent suicidal attempt, including self-mutilation acts, exposure to peer violence and sociodemographic data.

MATERIAL AND METHOD

Participants of the study included 34 girls aged 12–16, hospitalized in the Department of Paediatrics of the Medical University in Lublin due to medication overdose with the suicidal intention in the period of time from April 2014 to August 2015. All participants had undergone prior psychological consultation which confirmed the presence of suicidal thoughts. Twenty-eight (83%) of the participants were junior secondary school students, three individuals (8.5%) were secondary school students, and three other individuals (8.5%) were primary school students.

The tests were carried out by a psychologist specializing in working with children and adolescents after suicidal attempts. The participants were presented with a metric survey created specifically for the purpose of this study, and underwent guided interviews. The survey consisted of two parts, the first of which included 13 questions, and the

second one 34 questions. The first part comprised questions describing the person and the family of origin, e.g. the father's education, or the type of work done by the mother. The participants chose one of the specified options, such as: primary, vocational, secondary, or higher education. Some of the questions did not include specified answers, e.g. the question about the reason for the current admission to the hospital, in the case of which only a blank space for an answer was provided. The next part of the survey comprised questions presented in the form of statements, which the participants referred to by marking a number on a scale ranging from 1 to 10, where 1 meant "I hardly agree with the statement" and 10 meant "I highly agree with the statement." Exemplary statements included points such as: "there are family rows happening at home" or "I feel rejected by my parents and my family." The last part of the survey comprised 9 questions which the participants answered by marking either YES or NO [exemplary question: "Have you ever been a victim of peer violence? Was it physical violence? Was it virtual violence on the Internet (or through text messages)?"].

All participants were informed about the objective and the procedure of the study. For individuals younger than 16 years old, the consent to the participation in the study was given by one of the parents, in the case of individuals older than 16 years old, their own written consent to the study was granted as well. Both parents and participants received written information on the objective and purpose of the study.

Most of the participants, i.e. 15 individuals (44%) were daughters to fathers with vocational training. Nine of the fathers (26%) had received secondary education, five (15%) had received primary education, and four of the fathers (12%) had higher education. Fathers who were blue-collar workers constituted the most numerous group (17 individuals, 50%).

In the case of 11 girls (32% of all the participants), their mothers had higher education, another 11 (32%) had vocational training. Eight of the mothers (23%) had received secondary education, and four (11%) had received primary education. Nonetheless, mothers who performed manual work constituted the highest percentage (13 girls, 38%). The financial status was mostly assessed by the participants as good (20 participants, 58%) or average (7 participants, 20%). Approximately 6% of the participants (two individuals) declared their financial status to be extremely low. The majority of the patients declared they came from complete families, with both parents living together (19 participants, 55%).

| Parental relationships | Number of individuals | Percentage |
|-----------------------------|-----------------------|------------|
| Divorced | 7 | 21% |
| Living together | 19 | 56% |
| Brought up by single mother | 7 | 21% |
| Brought up by single father | 1 | 3% |

Tab. 1. Parental relationships in the tested group

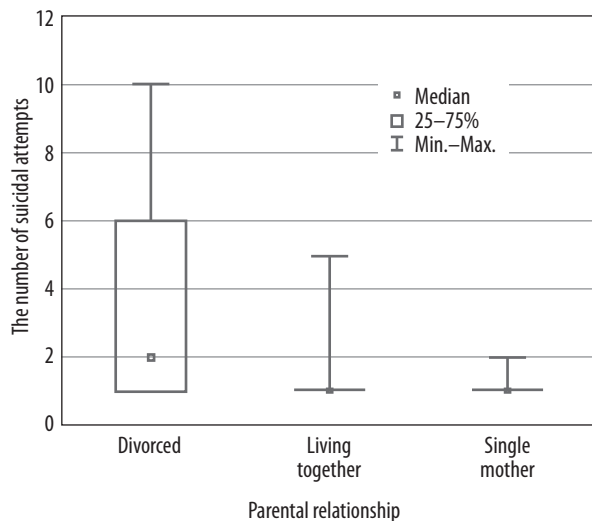


Fig. 1. The number of suicidal attempts among adolescent girls and parental relationships

Seven individuals (20%) declared to have been brought up by single mothers, and another seven participants (20%) declared their parents to be divorced (Tab. 1, Fig. 1).

Tab. 2 presents the number of suicidal attempts in the tested group. Girls submitted after the first suicidal attempt (27 individuals, 79%) constituted the majority of the participants of the following study. Another two individuals were submitted due to the second suicidal attempt (6%), and one person (3%) due to the tenth suicidal attempt (Fig. 2). In the tested group, five individuals have performed 15 acts of self-mutilation (14.7%), nine individuals have never performed self-mutilation acts (26.47%), whereas one person (3%) has performed 500 self-mutilation acts (Tab. 3).

The majority of the girls were hospitalized due to medication overdose (76%), 8% due to medication overdose and vein cutting, and 5% due to medication and alcohol overdose. The majority of the participants did not suffer from any concurrent disorder (85%), individual cases included allergies, depression, heart defects, asthma and epilepsy. The results obtained in the course of the study were scrutinized with the statistical analysis, with the use of STATISTICA software, ver. 10. Due to the lack of normal (Gaussian) distribution of several variables, the correlation between variables

| Number of suicidal attempts | Number of individuals | Percentage |
|-----------------------------|-----------------------|------------|
| 1 | 27 | 79% |
| 2 | 2 | 6% |
| 3 | 1 | 3% |
| 4 | 1 | 3% |
| 5 | 1 | 3% |
| 6 | 1 | 3% |
| 10 | 1 | 3% |

Tab. 2. The number of suicidal attempts among hospitalized adolescent girls

| Number of self-mutilation acts | Number of individuals | Percentage |
|--------------------------------|-----------------------|------------|
| 0 | 9 | 26% |
| 1 | 2 | 6% |
| 2 | 5 | 15% |
| 3 | 3 | 9% |
| 4 | 2 | 6% |
| 5 | 7 | 20% |
| 15 | 5 | 15% |
| 500 | 1 | 3% |

Tab. 3. The number of self-mutilation acts among hospitalized adolescents

was tested with Spearman correlation coefficient. Owing to the lack of normal distribution and the variety of the tested groups the hypotheses were verified with *U* Mann-Whitney test (comparison of two groups). When more than two groups were compared, the statistical analysis was conducted with Kruskal-Wallis test for unmatched groups, including post hoc analyses (Dunn test). The results were considered statistically valid at the probability level $p < 0.05$.

The objective of the present study was to arrive at the analysis of the functioning of girls after a suicidal attempt, including the number of self-mutilation acts, the number of suicidal attempts, and other variables such as: the experience of physical and psychological violence from parents, the occurrence of family rows, the subjective feeling of isolation and being rejected by the family, as well as sociodemographic data, such as the family's financial status.

RESULTS

Tab. 4 presents the correlation of Spearman ranks between the tested variables. A positive relationship between the number of self-mutilation acts and the number of suicidal attempts has been shown to exist – together with an increase in the number of self-mutilation acts there was an increase in the number of suicidal attempts ($p < 0.03$). Neither physical nor psychological violence affected the

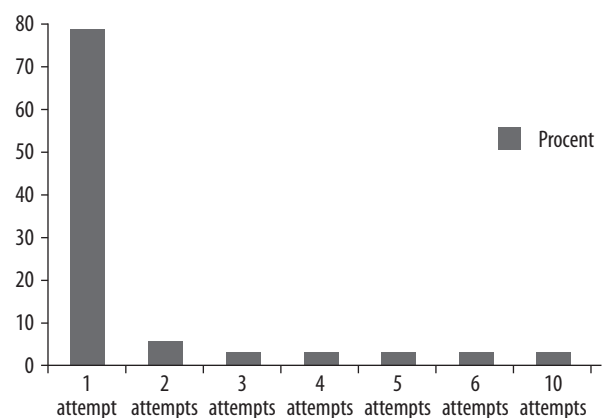


Fig. 2. The number of suicidal attempts

| Variables | R – Spearman | p |
|--------------------------------------------------------------------------|--------------|--------------|
| Physical violence from parents & Number of suicidal attempts | 0.069 | 0.699 |
| Physical violence from parents & Number of self-mutilation acts | 0.115 | 0.518 |
| Psychological violence from parents & Number of suicidal attempts | 0.147 | 0.405 |
| Psychological violence from parents & Number of self-mutilation acts | 0.022 | 0.902 |
| Family rows & Number of suicidal attempts | 0.111 | 0.529 |
| Family rows & Number of self-mutilation acts* | 0.341 | 0.049 |
| Feeling of being rejected by the family & Number of suicidal attempts* | 0.423 | 0.013 |
| Feeling of being rejected by the family & Number of self-mutilation acts | 0.307 | 0.078 |
| Feeling of isolation & Number of suicidal attempts* | 0.483 | 0.004 |
| Feeling of isolation & Number of self-mutilation acts* | 0.377 | 0.028 |
| Number of self-mutilation acts & Number of suicidal attempts* | 0.366 | 0.033 |

* Marked correlation coefficients are valid at $p < 0.05$.

Tab. 4. The number of suicidal attempts and family risk factors. Spearman rank-order correlation in the group of 34 participants

number of self-mutilation acts or suicidal attempts (Tab. 4). Together with an increase in the number of family rows, an increase in the number of self-mutilation acts was observed ($p < 0.04$). Still, such a relationship was not identified in the case of the number of suicidal attempts ($p < 0.58$). The feeling of isolation affected positively both the number of self-mutilation acts ($p < 0.02$) and the number of suicidal attempts ($p < 0.003$). There was a positive relationship between the feeling of being rejected by the family and the number of suicidal attempts ($p < 0.01$). Nonetheless, no statistically valid relationship has been observed in relation to the number of self-mutilation acts ($p < 0.07$).

The analysis of variables conducted with Kruskal–Wallis test has shown no relationship between the financial status and the number of suicidal attempts ($p < 0.82$) and self-mutilation acts ($p < 0.45$).

It has also been verified whether parental relationships affected the number of suicidal attempts or self-mutilation acts in the tested group of girls. Due to the small numerical force, the single person who was brought up by her father was excluded from the analysis. A relationship has been shown to exist between the parental relationships and the number of suicidal attempts in the tested group of girls. The majority of the suicidal attempts occurred in the group of individuals whose parents were divorced ($p < 0.007$) (Fig. 1). Nevertheless, such a relationship has not been observed in relation to the number of self-mutilation acts in girls ($p < 0.06$).

DISCUSSION

The phenomenon of auto-aggression and suicidal attempts among adolescent girls is the subject of an ongoing, vigorous debate. The results obtained by other researchers also bear

out the fact that the tendency towards self-destructive behaviours in women, when it exists, is manifested for the first time before the age of 18 years (Glowinski *et al.*, 2001). Interestingly, despite the popular belief that mental health is related to financial well-being, the financial status did not significantly affect the participants' decisions to make an attempt on their lives and health. Worth consideration is the fact that many researchers do not confirm the result obtained in this study indicating the lack of the relationship between being a victim of domestic or peer violence and the risk of self-destruction acts (Brunstein Klomek *et al.*, 2010; Kuberska-Przekwas, 2014; Makara-Studzińska, 2011). There is a probability that the result obtained in this study is due to the relatively small sample group, or due to the researchers' unawareness of the fact that being rejected by one's own family is also a form of psychological violence. The conclusion appertaining to psychological violence being related to parents' divorce and to being rejected by the family and relatives plays a decisive role in the following study in revealing the motive for self-destruction. Many authors emphasize family cohesion and the lack of pathology as the factors preventing the risk of self-destruction (Brent, 2009; Glowinski *et al.*, 2001). The final conclusion of the study appears to be unequivocal. For teenagers experiencing crisis, family disintegration and the feeling of isolation and of being rejected by the family are far worse in effect than experiencing physical violence used by parents.

CONCLUSION

On the basis of the obtained results, the following conclusions have been reached:

1. Adolescent girls manifesting a tendency towards suicidal behaviours are simultaneously prone to self-destructive behaviours, such as self-mutilation.
2. There is strong likelihood that the financial status of teenage girls' families influences neither their self-destructive behaviours nor the risk of the suicidal attempt.
3. Marital breakdown in the relationship between parents significantly affects the increase in the risk of suicide among adolescent girls.
4. Family rows do not always entail physical violence targeted at daughters, yet they always correlate with daughters experiencing psychological violence and the feeling of being rejected by the family.
5. Psychological and physical violence from parents does not significantly affect the number of self-mutilation acts and suicidal attempts among teenage girls.
6. The feeling of isolation as well as the feeling of being rejected by the family is directly related to the risk of self-mutilation acts and suicide among adolescent girls.

Conflict of interest

The authors do not report any financial or personal connections with other persons or organizations which might negatively affect the content of this publication and/or claim authorship rights to this publication.

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