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Gender differences in adolescent self-harming behaviour

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Abstract--The occurrence of self-harming behaviour as a non-adaptive coping strategy within the adolescent population is on the increase. In an effort to clarify the occurrence and characteristics of this high-risk behaviour, many experts have focused on an examination of the various variables related to the prevalence, risk, or protective factors of self-harm. Many studies have focused on gender differences; however, the results have been mixed. The study provides basic data on the incidence of self-harm in a group of male and female (N = 1699) adolescents (11-19 years, AM = 15.24). Through an analysis of the differences in prevalence, intensity, and types of self-harming behaviour, related to gender, it tries to identify the reasons for the different findings in the published literature. The results show that although the prevalence and overall intensity of self-harm is statistically higher in women, this does not apply to the most frequently studied direct physical forms of self-harm. Through its findings, the study draws attention to the need for a clear definition of self-harm as well as to the consequences of different diagnostic approaches.

Keywords--gender, prevalence, self-harm, types of self-harm.

Introduction

Over recent times the prevalence of self-harm has tended to increase [1], especially in the adolescent population [2]. To date there is no consensus in the specialist literature over the definition of self-harm; what all of the various definitions have in common is that they describe self-harm as repeatedly and intentionally causing yourself pain and wounds with the primary intention of causing self-injury. Most frequently, this is a physical injury [3], but a number of specialists also include mental self-injuries [4]. In an effort to clarify the

prevalence and characteristics of this high-risk behaviour, specialists focus on studying different variables related to the prevalence, risk and protective factors of self-harm. In this context, a number of studies have focused on differences between the genders, but their results have not been unambiguous. A statistically significantly higher prevalence of self-harm in men was recorded in Germany [5], and also in adolescents in China [6]. On the contrary, other studies report a preponderance of women among self-harming individuals [7, 8], or have stated that they have found no difference between the genders related to prevalence [9, 10].

The differences in findings concerning the prevalence of self-harm in men and women may stem from a number of factors. In addition to the different approaches used in data collection (e.g., anonymous questionnaires vs. face-to-face interviews) which may affect the respondents' willingness to admit self-harm (women are more communicative [11]), and the specificities of the study samples (e.g., in patients with eating disorders a more frequent comorbidity of self-harm may be assumed in women in comparison to men), different results may also be caused by the definition of self-harming behaviour, and possibly the way it is measured.

According to some concepts, self-harm is restricted to behaviour that leads to the direct destruction or alteration of your own bodily tissue [12], however, other authors have emphasised the need to also study so-called indirect forms [13] which cause harm to an individual's physical health but are not outwardly visible (e.g. self-poisoning). Still yet others have also included so-called mental forms [4] that cause psychological pain (e.g., entering a relationship to be rejected). It may be that men and women differ in the way that they cause harm to themselves and therefore differences in the behaviours (what types of self-harm) that are studied may affect the reported prevalence of self-harm. Another important factor could be the manner used to identify the prevalence of self-harm – some studies have considered self-harm to be a nominal variable (they investigate the presence/absence of self-harm) [14], while others have specifically focused on gender differences directly within the self-harming population alone [15].

The Objectives

With respect to the ambiguous study findings related to gender differences and the prevalence of self-harm as well as its intensity, in our study, we shall focus on the circumstances that could be identified as the possible reasons for the different results. The objectives of this study are:

- to discover differences in the occurrence of self-harm in men compared to women (self-harm as a nominal variable);
- to discover differences in the intensity of self-harm in men compared to women (self-harm as a scale variable);
- to discover differences in the intensity of self-harm within the individual types of self-harm (direct physical, indirect physical and mental) in men compared to women.

Methodology

The Subjects and Procedures

The study took place at primary and secondary schools during classes. Participation in the study was anonymous and voluntary, the participants (in the case of pupils aged < 15 years also their legal guardians) were informed of the purpose of the study and asked to voluntarily take part in the study and were told they could end their participation at any time without any consequences. Having provided informed consent, the participants were given a questionnaire which contained questions to elicit basic demographic data and then questions focused on establishing the occurrence of self-harm. 1,745 adolescents provided information; when the data was processed, 46 questionnaires (2.64%) were excluded due to a lack of information about self-harm. The final data set was made up of 1,699 adolescents between 11 and 19 (AM = 15.24; SD = 1.61 years) with a majority of female participants (N = 1,078; 63.4%). Given the nature of the study, after completion of the questionnaire, the participants were provided with information related to the availability of professional help, and the contact details of psychologists.

The Measures and Data Analysis

In addition to items that established the age and gender of the participants, a modified Self-Harm Inventory questionnaire (SHI – [4]) was used to establish the presence of self-harm, its intensity and forms. Items that were irrelevant for adolescents (e.g., “lost a job on purpose”) were removed from the original questionnaire and other items that often appear in adolescents (e.g., “over-exercised to hurt yourself”) were added. The list of items in the modified SHI questionnaire, along with their placement into three individual categories of self-harm, is shown in Table 1. The participants assessed the occurrence of each form of self-harm in the SHI questionnaire on a four-point scale (from never = 0 to often = 3) and this could result in a score from 0 to 60 points.

Table 1

Items in the modified SHI questionnaire placed into three categories of self-harm

“Have you ever intentionally, deliberately to cause yourself harm...”
Direct Physical Self-Harm
Scratched yourself on purpose
Hit yourself
Cut yourself on purpose
Exercised an injury on purpose
Banged your head on purpose
Burned yourself on purpose
Attempted suicide
Indirect Physical Self-Harm
Abused alcohol to hurt yourself
Not slept enough to hurt yourself

Starved yourself to hurt yourself
Over-exercised to hurt yourself
Made medical situations worse on purpose
Prevented wounds from healing
Overdosed
Abused prescription medication
Abused laxatives to hurt yourself
Mental Self-Harm
Tortured yourself with self-defeating thoughts
Engaged in emotionally abusive relationships
Distanced yourself from God as a punishment
Set yourself up in a relationship to be rejected

A participant was considered to have self-harmed if a repeated occurrence of self-harm was listed in the SHI questionnaire – if the participant scored 2 points or more (repeated behaviour), they were put into the group of self-harmers. A score of 0 (no self-harm) or 1 (once in their lifetime) were the criteria used to place a participant in the group of non-self-harmers. The intensity of self-harm was determined by the total score from the SHI questionnaire. The intensity, within the three categories of self-harm, was calculated as the sum of the points scored in the individual categories of self-harm (see Table 1); a points score between 0 and 21 points was possible in the direct physical self-harm category (Cronbach's Alpha = 0.738); from 0 to 27 points in the category of indirect physical self-harm (Cronbach's Alpha = 0.668); and from 0 to 12 in the category of mental self-harm (Cronbach's Alpha = 0.823). The statistical analysis of the data was carried out using the IBM SPSS (Statistical Package for Social Sciences) program, version 22. For all tests, the basic significance threshold was set to 0.05.

Results

The results of the Chi-Square Test (Table 2) show a statistically significant difference (sig. < 0.001) in the prevalence of self-harm in male and female adolescents in our study sample. The female adolescents self-harmed significantly more often than the male.

Table 2
Differences in the prevalence of self-harm in male and female adolescents

	Non-Self-Harmers	Self-Harmers	Total	Chi-Square Test	
				x ²	Sig.
Male	371	250	621	20.247	< .001
Female	522	556	1078		

Total	893	806	169 9	
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Similar findings (see Fig. 1) were yielded by an analysis of gender differences in the intensity of self-harm. The analysis was only carried out on the sample of self-harming adolescents – the female participants had a significantly higher score than the male participants (Mann-Whitney U = 79091.50; sig. = 0.002).

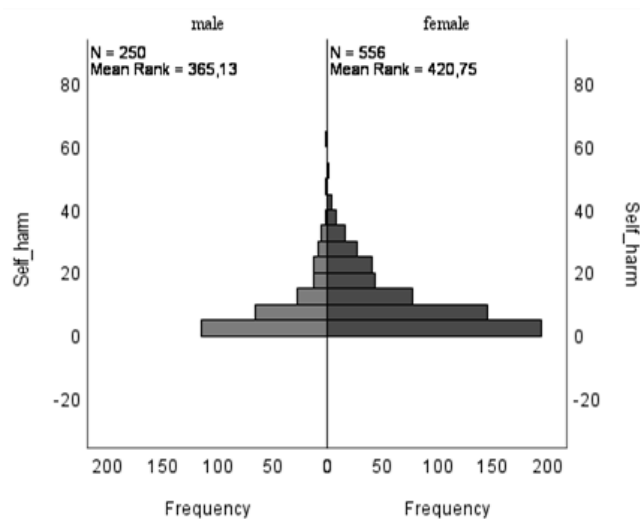


Fig. 1. Gender differences in the intensity of self-harm in self-harming adolescents

However, if we look at the differences within the individual types of self-harm, the results are not unequivocal. The prevalence of direct physical self-harm in male and female adolescents did not differ, differences were only seen in the categories of indirect physical and mental self-harm (see Table 2).

Table 2
Results of the Mann-Whitney U Test investigating gender differences in three categories of self-harm

Type of Self-Harm	Gender	Mean Rank	U	Sig.
Direct Physical	Male	371.38	69628.00	0.104
	Female	399.70		
Indirect Physical	Male	330.41	75229.50	< 0.001
	Female	406.75		
Mental	Male	354.35	71797.00	0.005
	Female	401.70		

Discussion

A higher prevalence of self-harm in female adolescents is in line with the results of a number of studies [7, 8, 16]. Most of them explain these outcomes with the statement that women regulate their emotions in different ways to men [17, 18].

Whereas men tend to react through externalised behaviour (e.g., alcohol abuse, aggression), women tend to react in a more protective self-focused way (e.g., rumination) and have higher rates of depression and anxiety [19]. These characteristics may increase the likelihood of the prevalence of self-harming behaviour which is frequently linked with anxiety, depression and rumination [20, 21].

A higher prevalence of self-harm in women may also be interpreted with regard to the fact that women are more inclined to mediate personal information to other people than men [22], they more often seek help when they have problems [23], and so the information from questionnaires as well as clinical data may report a higher prevalence of self-harm in women. In this context it is questionable whether the higher prevalence in women truly reflects reality and whether the absence of gender differences in the prevalence and intensity of self-harm in some studies may reflect the fact that men and women were equally willing to provide information about self-harm (e.g., in psychology colleges where students are used to introspection and openness). Studies that focus on the prevalence of self-harm also point to other variables that enter the relationship between self-harm and gender. For example, moderator analyses have shown that the gender difference was larger in clinical samples when compared to college/community samples [19]. This may explain why gender differences in self-harm were identified in some studies and not in others. Age may be another significant factor – self-harm was more common in females aged 16–19, but there were no significant gender differences within younger or older age groups [24]. Other authors have also highlighted different gender ratios for self-harm according to life cycle [25].

However, the analysis that focused on the individual categories of self-harm (direct physical, indirect physical and mental) showed that the reason for mixed results in the identification of differences in the prevalence and intensity of self-harm between genders may stem from the different approaches to the understanding of self-harm. Three principal approaches to the definition of what behaviour constitutes self-harm can be found within the specialist literature. The narrowest definition can be found in the fifth revision of the Diagnostic and Statistical Manual of Mental Disorders. In its appendix focused on suggestions for further research, it dedicates attention to self-harm and proposes the introduction of a clinical category “Non-Suicidal Self-Injury” (NSSI), which it would describe it as intentional behaviour that leads to damage to the surface of the body (inducing e.g., bleeding, bruising, or pain) without suicidal intent [3]). This definition includes the direct physical forms of self-harm but omits the indirect physical and mental forms. Another opinion is proffered by another classification framework – the International Statistical Classification of Diseases and Related Health Problems, 10th version – ICD-10 [26], which defines (within categories X60–X84) the term “intentional self-harm” as a wide range of behaviours including those which would fall into the category of indirect physical harm (e.g., self-poisoning, abusing medication). But there are also other approaches which include a wide range of behaviours, including the mental forms (e.g., torturing with self-defeating thoughts) [4], in self-harm. Results have shown that the definition of self-harm and the behaviours included will affect the differences discovered in its prevalence between genders.

Nevertheless, the lack of a singular clear definition of self-harm in psychology and its related disciplines have much more serious consequences than merely the generation of ambiguous data concerning the prevalence of this risky behaviour in different groups. Its impact relates to the diagnosis of self-harm and subsequent intervention/specialist help. For instance, analyses of the consequences of using a narrow definition of self-harming behaviour, such as the NSSI concept (compared to a wider definition of self-harm that also includes mental forms), showed that 15.5 % adolescents would not be diagnosed as self-harmers (and there would be no intervention) [27]. From the results, it, therefore, follows that in order to answer the questions related to gender differences in self-harm it is necessary to observe a number of other related variables. It is also evident, for the sake of research into self-harm, that it is essential to reach a consensus in the definition and range of what is considered self-harming behaviour.

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