

## Chapter #8

### INDIVIDUAL AND SOCIAL CORRELATES OF SELF-HARM AMONG SLOVAK EARLY ADOLESCENTS

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#### ABSTRACT

**Background:** Adolescence is the period of life in which intentions of self-harming thoughts and behaviour are initiated and may escalate. Self-esteem, self-control, satisfaction with life, social support and substance use seem to be important factors related to such behaviour.

**Aim:** The study explored the relationship between self-harming thoughts/behaviour and self-esteem, self-control, satisfaction with life, alcohol consumption and social support.

**Sample and methods:** A representative sample of 572 (50.1% male) elementary school pupils (age: M=12.49 years, SD=.59) was collected within a school-based universal prevention project. Binary logistic regression was used to analyse the data.

**Findings:** Self-harming thoughts of adolescents were found to be negatively associated with self-control ( $p=.048$ ), self-esteem ( $p<.001$ ) and positively associated with alcohol consumption ( $p=.003$ ). Self-harming behaviour was found to be negatively associated with self-esteem ( $p=.002$ ), supportive relationships at home ( $p=.029$ ) and satisfaction with life ( $p=.033$ ). A positive relationship between alcohol consumption and self-harming actions of adolescents ( $p=.014$ ) was found. Our data did not support the existence of gender differences in these behaviours.

**Conclusions:** The study has contributed to our understanding of the factors associated with self-harming behaviour among adolescents. This is a finding that can be used for targeting prevention programmes.

**Keywords:** self-harming behaviour, self-harming thoughts, self-esteem, self-control, social support, alcohol use, satisfaction with life.

#### 1. INTRODUCTION

Self-harming behaviour can be defined as a deliberate and voluntary physical self-injury that is not life-threatening and is without any conscious suicidal intent (Borges, Anthony, & Garrison, 1995; Herpetz, 1995 in Laye-Gindhu & Schonert-Reichl, 2005). The most common motivations underlying self-harm include expressing and reducing negative emotions, distraction from these and the release of anger or tension (Rodham, Hawton, & Evans, 2004). All self-harm constitutes a risk for safety and health and has severe consequences (Kokkevi et al., 2014).

While self-harm has gained a lot of scientific attention, not much research has focused on adolescents (Laye-Gindhu & Schonert-Reichl, 2005). In particular, there have been few studies about young adolescents (younger than 14) and the factors associated with self-harm intentions and behaviour during this particularly vulnerable period of life (Stallard, Spears, Montgomery, Phillips, & Sayal, 2013).

Adolescence is the period of life in which self-harming behaviours are often initiated, when they may become a sustained habit (Simeon & Favazza, 2001) and when they may escalate. Many adversities and difficulties in adolescence are associated with significant changes in the psychological and social development of young girls and boys (Oshio, Kaneko, Nagamine, & Nakaya, 2003). Various problems in adolescence can lead to opposition towards a perceived unsatisfactory family environment, a desire to escape from reality and can result in self-harming behaviour.

A number of factors are associated with self-harm among adolescents (Prinstein et al., 2010). Many studies have demonstrated the importance of substance use including smoking and alcohol abuse in developing self-harming behaviour (Evans, Hawton, & Rodham, 2004). Deliberate self-harm has also been linked to family structure and the quality of relationship and communication with family and peers (Bridge, Goldstein, & Brent, 2006; Evans et al., 2004).

Other risk factors of self-harm behaviour among adolescents include depressive mood, somatic complaints, poor family relationship and poor school performance (Laukkanen, Rissanen, Honkalampi, Kylmä, & Tolmunen, 2009). Parental interest reduces the behavioural and emotional problems of young people (Finkenauer Engels, & Baumeister, 2005). Wills, Mariani, and Filer (1996 in Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2006, p. 1085) have stated that “support from parents is the glue that bonds adolescents to mainstream institutions and builds self-control.” Self-esteem and self-control seem to be relevant factors linked to the problem behaviour of early adolescents. Low levels of self-control have been associated with behavioural problems (Finkenauer et al., 2005). Self-harming behaviour of adolescents is a complex and multifactorial phenomenon although there has been no empirical evidence so far that parental interest and support control are relevant protective factors of such behaviour (Wong, Man, & Leung, 2002 in Cruz, Narciso, Munoz, Pereira, & Sampaio, 2013).

Estimates of the prevalence of self-harm among adolescents differ from study to study and from country to country because of different sociocultural conditions, different methodologies and theoretical backgrounds. Approximately 20% of European adolescents have reported self-destructive thoughts and/or behaviours (Cheng et al., 2009; Toro et al., 2009 in Cruz et al. 2013). According to a meta-analysis by Evans, Hawton, Rodman & Deeks (2005), about 13% of adolescents have engaged in deliberate self-harm. Portzky, De Wilde and van Heeringen (2007) reported a 10.4% life time prevalence of self-harm behaviour among Belgian adolescents. This compared to a 4.1% life time prevalence of self-harm behaviour among Dutch adolescents and a 20.1% compared to 9.5% incidence of self-harming thoughts among Belgian and Dutch adolescents respectively. Laye-Gindhu and Schonert-Reichl (2005) reported 42% self-harm ideation and 16% engaging in self-harm behaviour among Canadian adolescents.

Deliberate self-harm in adolescents is more prevalent among girls compared to boys (Fliege, Lee, Grimm, & Klapp, 2009; Laye-Gindhu & Schonert-Reichl, 2005; Portzky et al., 2007; Rodham et al., 2004) in those with substance abuse including alcohol drinking (Fliege et al. 2009; Laukkanen et al., 2009) and in those with low self-esteem (Darche, 1990; Favazza and Conterio, 1989 both in Laye-Gindhu & Schonert-Reichl, 2005; Fliege et al. 2009; Laye-Gindhu & Schonert-Reichl, 2005; Portzky et al., 2007). Self-esteem has been negatively linked to the tendency of harming oneself (Cruz et al., 2013). Laukkanen et al. (2009) reported gender differences among adolescents in self-cutting (girls injured themselves more often than boys) but they stated that the risk of lifetime history of other self-harm was mostly the same in boys as in girls. Other studies have not found a difference in self-harm thoughts and/or behaviour between girls and boys (Garrison et al., 1993 in Laye-Gindhu & Schonert-Reichl, 2005).

## **2. OBJECTIVES**

The study aimed to assess the prevalence of self-harming thoughts and self-harming behaviour among adolescents in Slovakia. It also tested whether this was related to gender, self-esteem, self-control, satisfaction with life, alcohol consumption and social support represented by supportive relationships at home, at school and with friends.

## **3. METHODS**

The study was based on data collected within a universal school-based prevention project. Participation in the study required consent from the school headteacher and the child's parent. The study was approved by the Ethics Committee of P.J. Safarik University in Kosice.

### **3.1. Sample**

The study used a stratified sample design. Elementary schools were randomly selected and 24 of them agreed to participate in the study. Every class of 7<sup>th</sup> graders at every school was asked to participate in this research. The schools were selected from different cities based on their geographical locations in the east, centre and west of Slovakia with 6 clusters based on population size. The data were collected in September/October 2017.

The research sample includes data from 572 young adolescents at an elementary school in Slovakia. Approximately half the sample (50.1%) was made of boys, the average age was 12.49 years old and the standard deviation was .59 years.

### **3.2. Measures**

The respondents completed the Self-Control Scale, the Self-Esteem Scale, the Resilience and Youth Development scale, the Satisfaction with Life scale and were also asked about alcohol consumption and whether they had ever thought of harming themselves or if they had tried to harm themselves.

The dependent variables, self-harming intentions and behaviour, were dichotomized: 0 = no self-harming intentions/behaviour occurred; 1 = self-harming intentions/behaviour occurred one or more times.

The Self-Control Scale (Finkenauer et al., 2005) consisted of 11 items and respondents could answer on a five-point scale (1 = never, 5 = always). A higher score indicated a higher level of self-control. The Cronbach alpha was 0.574.

The Self-Esteem scale (Rosenberg, 1979) consisted of 10 items. Respondents could answer on a four-point scale. A higher score represented a higher level of self-esteem. The Cronbach alpha was 0.709.

Support from parents, teachers and friends was measured by the Resilience and Youth Development Module (Furlong, Ritchey, & Brennan, 2009). There was a five-point answer scale. A higher score represented a higher level of support. Each domain of social support was represented by three items. The Cronbach alpha of the social support scales were: home – 0.829, school – 0.690 and friends – 0.897.

Respondents were also asked about how satisfied they were with their appearance, their financial situation and the financial situation of their family as well as the relationships with their mother, father and friends. They could answer on a five-point scale (1 = not at all satisfied; 5 = completely satisfied). The summary score of satisfaction with important

domains of life was calculated by adding up all the individual items. The Cronbach alpha was 0.691.

Lastly, the respondents were asked if they had ever drunk alcohol beverages and if so, how often. They answered on a five-point scale (1 = no, never; 5 = regularly, at least once a week).

### 3.3. Statistical analysis

The differences between the group means were tested using a Student's t test. Since the dependent variables were dichotomized, binary logistic regression was used. We created two models, one for self-harming thoughts and one for behaviour. The models each contained eight dependent variables (gender, self-esteem, self-control, supporting relations at home, at school and with friends, life satisfaction, alcohol consumption). All statistical analyses were performed using IBM SPSS-22.

## 4. RESULTS

About 39% of the adolescents in the research sample reported self-harming thoughts and about 19% of all respondents reported that they had tried to harm themselves (Figure 1). Importantly, 9% of our research sample (adolescents aged between 12 and 13) have tried to harm themselves more than once. We did not find any statistically significant gender differences in the frequency of self-harming thoughts and behaviour.

Figure 1.  
Percentage of reported self-harming thoughts and behaviour among Slovak adolescents.

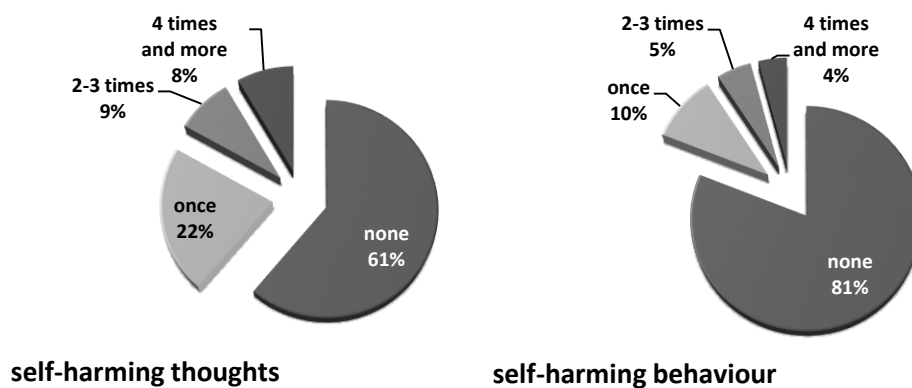


Table 1 displays the basic descriptive data for the independent variables as well as the differences according to gender. With the exception of satisfaction with life, we can see statistically significant gender differences in all independent variables (the assumptions for using parametric statistics were fulfilled). We found a higher level of self-esteem, self-control and alcohol consumption among boys and a higher level of supportive relationships among girls.

Table 1.  
Descriptive data and gender differences in independent variables.

Independent variable	mean			range		t	significance
	girls	boys	total	min	max		
Self-esteem	26.63	28.12	27.37	14.00	40.00	4.470	<b>.000</b>
Self-control	34.45	36.29	35.39	15.00	55.00	3.250	<b>.001</b>
SR - home	10.35	9.85	10.10	3.00	12.00	- 2.447	<b>.015</b>
SR - school	8.38	7.95	8.17	3.00	12.00	- 2.029	<b>.043</b>
SR - friends	10.18	8.13	9.17	3.00	12.00	- 8.557	<b>.000</b>
Satisfaction with life	23.82	24.42	24.12	7.00	30.00	1.845	.066
Alcohol consumption	1.62	1.75	1.69	1	5	2.209	<b>.028</b>

Table 2.  
Regression model for self-harming thoughts among Slovak adolescents.

Cox & Snell R <sup>2</sup> = .171 Nagelkerke R <sup>2</sup> = .232	B	Wald	Sig.	Odds Ratio	95% C.I. for Odds Ratio	
					Lower	Upper
Gender	-.142	.285	.611	.970	.863	1.090
Self-esteem	-.200	22.802	<b>&lt;.001</b>	.819	.755	.889
Self-control	-.040	3.918	<b>.048</b>	.961	.923	1.000
SR - home	-.030	.259	.611	.983	.880	1.097
SR - school	-.018	.098	.754	.754	.983	.880
SR- friends	.048	.914	.339	.339	1.049	.951
Life satisfaction	.000	.000	.992	1.000	.925	1.082
Alcohol consumption	.507	8.896	<b>.003</b>	1.661	1.190	2.318
Constant	5.529	22.539	<b>&lt;.001</b>	251.952		

Note: SR - supportive relations

The regression model for self-harming thoughts correctly classified 71.8% of the cases. Depending on the coefficient used, it explained 17.1% to 23.2% of the variance in the dependent variable. There was a statistically significant negative association with self-control ( $p = .048$ ) and self-esteem ( $p < .001$ ) and positive association with alcohol consumption (Table 2).

The regression model for self-harming behaviour correctly classified 82.2% of the cases. Depending on the coefficient used, it explained 14.5% to 23.4% of the variance in the dependent variable. As shown in Table 3, only four independent variables made a statistically significant contribution to the model. Self-harming behaviour was found to be significantly negatively associated to self-esteem ( $p=.002$ ), supportive relationships at home ( $p=.029$ ) and satisfaction with life ( $p=.033$ ). Relationship between alcohol consumption and self-harming behaviour was positive and statistically significant ( $p=.014$ ). There were no statistically significant effects of self-control, supportive relationships at school or supportive relationships with friends (Table 3).

Table 3.  
Regression model for self-harming behaviour among Slovak adolescents.

Cox & Snell $R^2 = .145$ Nagelkerke $R^2 = .234$	B	Wald	Sig.	Odds Ratio	95% C.I. for Odds Ratio	
					Lower	Upper
Gender	-.073	.047	.828	.930	.483	1.790
Self-esteem	-.147	9.168	<b>.002</b>	.864	.785	.950
Self-control	-.030	1.438	.230	.970	.924	1.019
SR - home	-.149	4.789	<b>.029</b>	.861	.753	.985
SR - school	.105	2.144	.143	1.111	.965	1.279
SR- friends	-.070	1.406	.236	.932	.830	1.047
Life satisfaction	-.099	4.560	<b>.033</b>	.906	.828	.992
Alcohol consumption	.503	6.074	<b>.014</b>	1.654	1.108	2.468
Constant	6.169	20.188	.000	477.757		

Note: SR - supportive relations

To sum up, our data did not support the existence of a statistically significant association between gender and self-harming thoughts or behaviour.

## 5. DISCUSSION AND CONCLUSION

The study explored the prevalence and psychosocial correlates of self-harm among early Slovak adolescents. Self-harming thoughts and behaviours among adolescents can be observed as early as grade 7 (between 12-13 years old). This study of Slovak adolescents has revealed that the life-time prevalence of self-harming thoughts was 39% and life-time prevalence of self-harming behavior was 19%. These results are quite high compared to the studies from other countries (Cheng et al., 2009; Toro et al., 2009 in Cruz et al. 2013; Evans et al., 2005; Portzky et al., 2007) although the prevalence of self-harming thoughts was slightly lower than in the study of Canadian adolescents (Laye-Gindhu & Schonert-Reichl, 2005). In contrast to most authors (Fliege et al. 2009; Laye-Gindhu & Schonert-Reichl, 2005; Portzky et al., 2007; Rodham et al., 2004), our study did not confirm any gender differences in self-harm thoughts and behaviours among Slovak adolescents. This result was consistent with Laukkanen et al. (2009) who found gender differences among adolescents only in self

cutting. However, according to these authors the lifetime histories of other self-harm was the same, on average, for both boys and girls.

Self-control and self-esteem seem to be important factors associated with thinking about harming oneself among Slovak adolescents. However, real attempts of harming oneself are also significantly associated with support at home, especially from parents. The probability of self-harming thoughts and self-harming behaviours was lower among adolescents with a higher level of self-control and self-esteem. The same held for adolescents supported by their parents more. Satisfaction with important life domains, especially with social relationships, seems to be a protective factor of self-harming behaviour. The results are consistent with some previous research (Bridge et al., 2006; Cruz et al., 2013; Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005; Evans et al., 2004; Finkenauer et al., 2005; Kelly et al., 2012). The finding that alcohol consumption was associated with both self-harming thoughts and self-harming behaviour corresponds to the findings of Evans et al. (2004).

The sample design, which provided a nationally representative sample, constitutes a major strength of this study. The use of an anonymous self-report questionnaire helped to fight non-response bias which would probably have been higher if other data collection methods had been used. The study is also novel in its focus on younger adolescents.

A limitation of the study lies in the small number of items related to self-harm that were included in the questionnaire. This was the case because the questionnaire was constructed as part of a wider research project. More items related to self-harm would have given us additional in-depth information and would have helped to better assess whether the concept of self-harm was understood similarly across all the respondents. A lower reliability of some scales constitutes another related limitation.

In terms of future research, it would be beneficial to do longitudinal study and combine qualitative and quantitative research methods.

The study has contributed to our understanding of the factors associated with self-harming behaviour among adolescents. It suggests the importance of self-esteem, self-control, life satisfaction and social support in predicting such behaviour among adolescents. This is a finding that can be used for targeting prevention programmes.

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