

## A STUDY OF HUNGARIAN ADOLESCENT OUTPATIENTS SUFFERING FROM SELF-INJURIOUS BEHAVIOUR

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### SUMMARY

*In this pilot study (Study A), the authors administered the Hungarian standard version of Beck Depression Inventory (BDI) and the translated version of the Ottawa Self Injury Inventory (OSI) to students of 3 educational facilities in a county town. Fourteen to eighteen year old pupils were tested in order to measure the key symptoms of depression and the frequency and characteristics of self-injurious behaviour among this sample of the high school population. Twentysix youngsters were found to have had any form of self-injurious actions in their life-time. The paper presents descriptive data on the basis of statistics of symptom occurrence. Although the depressive symptoms have an expected correlation with the self-injurious ideas, depression seems not to have the same relationships with actual self-harm action.*

*In study B, the authors present descriptive statistics on the data of 48 female outpatients from the total pool of 72 adolescents aged 14 through to-18 years (average age 16.1 years) showing symptoms of self-injurious behavior according to the Ottawa Self Injury Inventory (OSI). All patients were recruited from a one-year clinical, representative sample of the „Pannonia” multicentre adolescent psychiatry survey. Ten point two percent of consecutively referred and 25.6% of treated adolescent patients had symptoms of self-injurious behavior over a one-year period in 4 Transdanubian Child Psychiatric Centers, which is more frequent than the expected rate. Referring to the clinical diagnoses of adolescents confirmed by M.I.N.I. Plus Diagnostic Interview, the authors estimate, that the majority of these young people suffered from episode(s) of present or past major depression, from whatever form of anxiety disorder and/or from suicidal behaviour. The study presents details of risk behavior including motivations, frequency of acts, ideas, afflicted body regions, emotional correlates, secondary obtained benefits, escalation of problem behavior and consequences in detail.*

**Key words:** school-based and a regional-representative study - Hungarian adolescent outpatient sample practising self-injury - Ottawa/Queen's Self-Injury Questionnaire (OSI) - M.I.N.I.Plus International Neuropsychiatric Interview - clinical diagnoses - characteristics of risk behaviour

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### INTRODUCTION

Self-injurious behaviour (SIB) is an increasing problem in teenagers and creates difficult treatment challenges in child and adolescent psychiatry centres throughout the world. According to community-based studies, SIB has an increasing

prevalence rate in high school reports and in community-based surveys in adolescence (2.2%-15%, Hawton et al. 1997, Briere & Gil 2002, Hawton et al. 2002, Rodham et al. 2004, Haavisto et al. 2005, Laye-Gindhu & Schonert-Reichl 2005). Ross & Heath (2002) stress that 13.9% of students, especially girls in community samples

report self-mutilation. The terminology of self-harming activities varies with the places of research, U.K. studies prefer the term “deliberate self-harm” (DSH). DSH is the most frequent diagnosis among adolescent females in outpatient psychiatric facilities although self-poisoned cases are not calculated in the statistics of every study (Hawton et al. 1997, 2002). The term „deliberate self-harm” includes both self-injurious and suicidal behaviour, Hawton estimates that up to 30% of adolescent patients in a population who self-poisoned definitely wished to die.

Apart from suicide, there are controversial data as to which psychiatric disorders associate best with self-injurious behaviour. A few authors argue (Stanley et al. 2001, Haavisto et al. 2005), that self-injurers had mainly depressive symptoms or major depression, while the majority of researchers confirm externalistic disorders as the most frequent comorbid problems of self-injuring youth. Stanley mentions aggression and impulsivity. According to Laye-Gindhu (2005), adolescents who admitted harming themselves reported increased antisocial behaviour, anger problems and health risk behaviour. In the study of Matsumoto et al. (2004) Japanese patients with habitual self-mutilation had (among others) a history of illicit psychoactive drug use, sexual abuse and childhood sexual abuse. Langbehn & Pfohl (1993) stressed, that self-mutilators were more likely to have a history of substance abuse, than controls. Some authors document the comorbidity of self-harm with anxiety disorders. Consequently, it is worthwhile to clarify the comorbid psychiatric diseases in self-injurious adolescents reaching clinical severity.

### Aims

- To identify features of self-injurious behaviour and their correlations with depressive and suicidal symptoms in Hungarian adolescents /School sample, Study A/.
- To present diagnoses of self-injurious adolescents treated in Child Psychiatric (outpatient) centres of Hungary.
- To identify features of self-injurious behaviour in detail.
- To report the annual incidence data of self-harm (as a medical diagnosis) related to the total adolescent new outpatient circulation in 4 counties of Hungary, Pannonia (Transdanubian) region /Clinical sample, Study B/.

### SUBJECTS AND METHODS.

**Samples. Study A.** Two classes from each grade of 2 average high technical schools and of one gymnasium were selected for the pilot study as highly representative of the school spectrum of Veszprem (Transdanubian region, West-Hungary). Of the 450 students, who participated in the study (287 boys, 163 girls), 23 youths (5.1%) were excluded because of missing data and of lack of basic cooperation, The final sample (n=427) included 26 students (0.57%, 16 boys and 10 girls) who had committed self-harm practices in the previous six months. The mean age of the sample was 16.7 years.

**Study B.** Fourtyeight female adolescent outpatients of a total of 72 self-injuring adolescent outpatients (excluding 13 boys plus 11 individuals, who failed to have a diagnosis confirmed by M.I.N.I. interview) were recruited from a representative total pool (n=395) of recently referred new outpatients in four county Child Outpatient Psychiatric Centres, Transdanubian region, Hungary (Fejer, Veszprem, Somogy, Baranya) in a one-year admission period. The rate of self-injuring adolescents among the new outpatients obtained 18%.

### Assessment methods

- a) To assess risk behaviour, the Hungarian pilot version of the *Ottawa/Queen's Self-Injury Questionnaire (OSI, Nixon & Cloutier 2002)* was used\*. The OSI is widely used to measure self-injurious behaviour (SIB) both in community-based surveys of adolescents as well as in clinical samples in Canada, in the US and Germany. The OSI is comprised of a series of questions (37) covering many different aspects of SIB including: urges and acts, feelings and climate of the behaviour. It includes items assessing the impulsivity of the behaviour, the sequela of SIB efficacy, motivation to stop, as well as when and how the behaviour started and what maintains it. Self-reported effectiveness of self injury at regulating negative affect and a scale to measure the motivation to stop engaging in SIB are also added. The test has a good test/retest reliability (Cloutier & Nixon 2005). The Hungarian translation (pilot version) was made by the first author, the questionnaire were administered after written consent and parental approval to patients.

- b) Beck Depression Inventory (BDI)-Hungarian standard version (total scores).
- c) All diagnoses of the clinical sample were confirmed by M.I.N.I. Plus Neuropsychiatric Diagnostic Interview (Hungarian standard version Balazs & Bitter 1998, 2000). The interview contains 18 categorical diagnoses including 3 diseases (major depression, mania, panic) with two time frames and additionally a distinct entity of suicidal behaviour with 6 items.

### Statistical methods

Basic descriptive statistics on both samples. Pearson correlation test between frequency of self injurious thought and actions with the variables BDI.(community-based sample)

## RESULTS

**Study A.** As presented in Table 1, numerous youths with deliberate self-harm have key symptoms of depression, 46% and 69% reported sadness and irritability as expected. Loss of pleasure, - referred specifically to major depression - was recorded in only 25%. According to expectations, suicidal thought was recorded in a high percentage (over 60%) of self-cutting adolescents, further, more than half of the ideators reported serious suicidal impulses, the rate of attempted suicide reached 31%. OSI and BDI presented similar rates in the same items. The high occurrence of attempted self-harm acts (91%) in the past six months is in striking discordance with the lower rate of accompanying self-destructing impulses/ thought (57%) in the same time period. The change may confirm the impulsive character of the self-destructive behavior: the action is not preceded by conscious intentions in more than half of the self-injurers. Important consequences are presented in Table 1. More than 50% youths started the deliberate self-harm acts at the age of eleven, the action is followed within 15 minutes after the impulses emerged. Though everybody regarded the self-injuring act as „unsuccessful”, still nobody seriously considered ending the maladaptive practice. The reason for self-destruction is the well-known „object losses” also met in the background of suicide attempts in many authors (breakup of dating or friendship, failure, feeling of being denied etc, see Hawton et al. 1982) The self-harm is followed by a transitory episode of relief,

more than half of the youths failed to inform even his/her closest friend about the would-be deliberate self-harm.

**Table 1.** Major rates of symptoms measured by Beck Depression Inventory (1) and Ottawa Self-Injury Inventory for Adolescents (2)

Sadness (1)	46%
Irritability (1)	69%
Loss of pleasure (1)	25%
Suicidal thought (1)	61%
Suicidal thought (2)	69%
Serious suicidal ideas (2)	34%
Suicide attempt with wish to die (2)	31%
Self-harm impulses within 6 months (2)	57%
Self-harm impulses in the past month (2)	43%
Self-harm action within 6 months (2)	91%
Impulses are intrusive/hard to resist	46%

Table 2. presents the relationship of self-injurious behaviour with associated factors (suicidality, depression). The key symptoms of depression as well as suicidal ideation correlated significantly but moderately with the impulses of deliberate self-harm. Realised self-harm has however failed to show a significant association with the depressive symptoms, thus, self-injurious impulses have stronger association with depressive ideas than does the attempted act. Irritability is neither correlated with suicidal nor with self-harm items. According to expectations, loss of pleasure (as one of key symptoms of major depression) is associated significantly with self-injurious impulses and suicidal thought. However, striking *negative* associations of anhedonia with realization of self-injury might refer to the double character of self-harm, since impulses/ thoughts and actions have divergent tendencies, they have not exactly the same predictors.

Correlations demonstrate the strenght of associations among maladaptive practices (self-harm, depression and suicidality).Based on the results of the school survey, reporting the relationships of self-injurious behaviour with depressiveness and suicidality we launched the clinical phase to demonstrate which psychiatric disorders associate with the self-injurious behaviour if the deliberate self-harm reaches clinical severity.

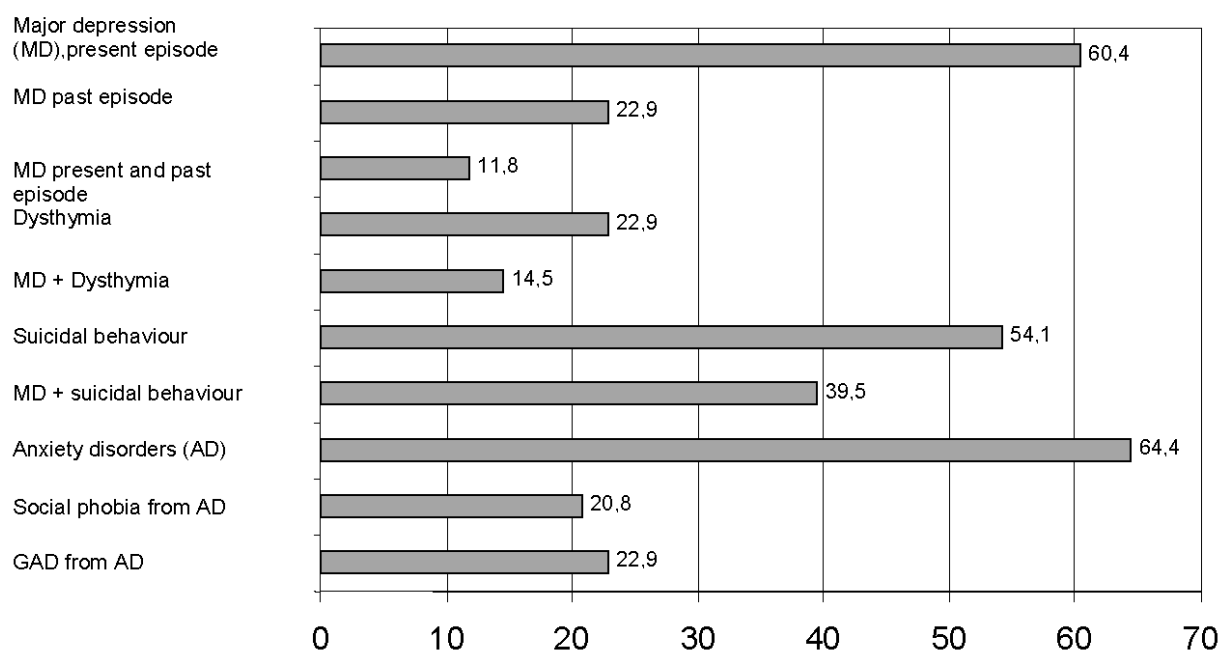
**Table 2.** Inter-correlations of self-harm, suicidal and depressive items+

BDI/symptoms	Self-harm++ impulses	Self-harm++ acts	Suicidal thought (OSI)
Sadness	0.554***	-0.218	0.656***
Suicidal thought/ideas	0.459*	0.136	0.603***
Irritability	0.505 $\psi$	0.202	0.422
Loss of pleasure	0.539***	-0.555***	0.614***

+ Pearson correlation coefficients (r); \*0.01; \*\*\*0.001; ++ past six months;  $\psi$  nonlinear relationship

**Study B.** Figure 1. shows that the majority of diagnoses of the clinical sample was major depression (present and past episode 60 and 23 % respectively), the second, most prevalent disease was at least one anxiety syndrome (social phobia or general anxiety disorder /GAD/, 64%) and the third leading diagnosis was suicidal behaviour (half of the sample). The comorbidity of major depression with suicidal behaviour reached 41 % in the sample, dysthymia and externalizing diagnoses (conduct and adjustment disorder) played role which was much below expectations. The majority of patients (80%) had 2-3 diagnoses

(mean of number of diagnoses was 2.6). The typical „3 diagnoses patient” had the diagnostic constellation of major depression + suicidal behaviour + one type of anxiety disorder. The greater is the comorbidity, the more is the chance of acquiring major depression into the list of diseases the patients suffered from (59-70-83% occurrence of depression in patients having 3-4-5 diagnoses). According to the Ottawa Self Injurious Inventory, 83 and 64% of our clinical sample reported occurrence of suicidal thought and of attempted suicide respectively. Half of the youth attempted suicidal acts repeatedly.



\* Percent rates exceed 100% as each diagnostic target is presented (multidiagnostic patients)

**Figure 1.** Diagnoses of self-injurious adolescents (%)

The most frequent type is that of self-cutterers, the regions affected best are the upper and lower-arm or hand. In the case of a chronic process, the legs are also involved.

The preferred methods are cutting, scarifying, wound-making and burning of a body region. Only 50% gives some information about their planned self-injuring to somebody (regularly to their best

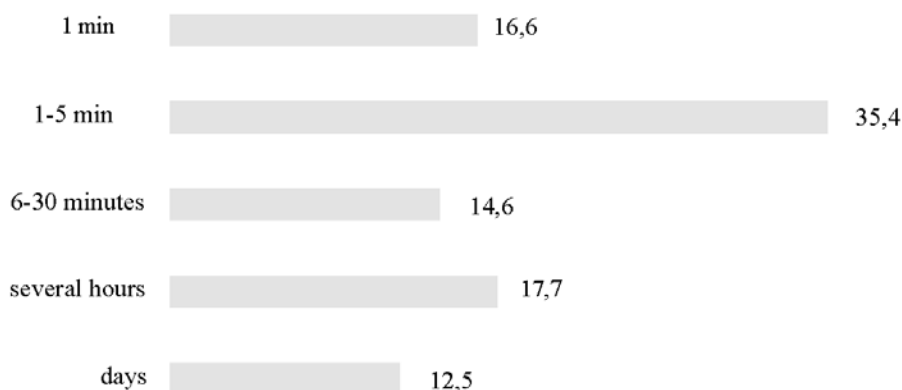
friend), but 40% shares no information about their self-destructive impulses.

Among motivations, crisis in romantic relationship (54%), academic or social failure (20%) and feeling of denial (12%) reached eminent importance. Whenever the adolescent feels herself involved in stress, 86% thinks of self-injury first. The tasks the girls aim at are to appease her rage

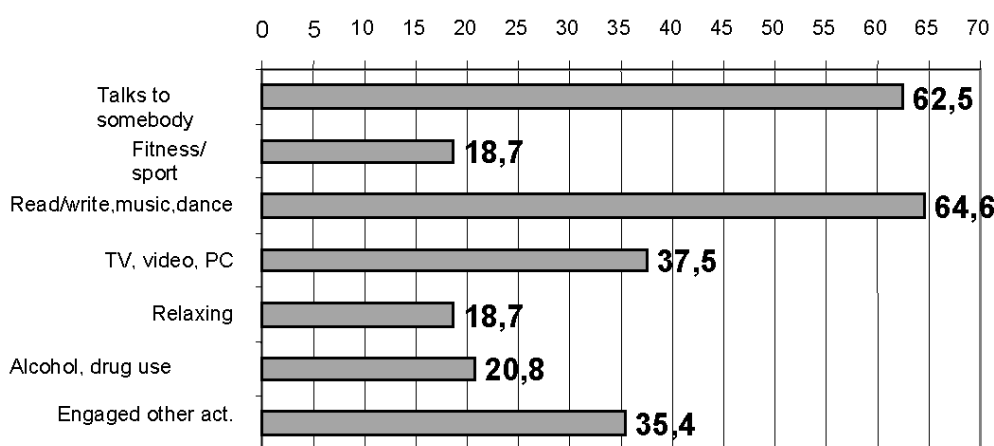
(67%), her depression (32%), her irritable mood (27%), and to moderate her feelings of hurt (23%). The act may yield some subjective remedy in ceasing irritability but fails to abolish depression in the long run. More than 44% of the sample starts risk behavior between the age of 13-14 years.

The half of the sample (Figure 2) commits the self-injurious act rapidly or impulsively (1-5 minutes internal fight with the impulses), a sixth of patients hesitates 15-30 minutes, while the last third of patients have an incubation time lasting hours and several days, this presentation being similar to suicidal adolescent patients. According to these results, adolescents with SIB seem to have „impulsive” and „planned” subtypes. Figure 3. reports which forms of substitute activities are

preferred if the patient is ready to divert herself from self-destructive ideas. Although we found high percentages of „talking to somebody”, of her activities like reading, watching tv etc. reflecting in their responses, some further factors seem to counteract the optimism that adolescents would be able to utilize substitute activities extensively. Fiftysix percent reported the act as pleasant, intrusive, or stressing in positive terms, 40% continues the risk behaviour although they were highly conscious of the disadvantages the realized acts involve. Twenty percent confessed themselves non-motivated to change and 40% described themselves as „less motivated” to obtain alteration in their behaviour.



**Figure 2.** Time period between thinking/doing (%)



**Figure 3.** Substitute activities if she resists injuring herself (%)

### SOME EPIDEMIOLOGICAL DATA

This representative cross-sectional epidemiological survey enables us to estimate the incidence rates per year (Verhulst et al. 1992) of the medical diagnosis of self-injurious behavior in Central- and Southern Transdanubian region): Based on the

whole number of self injuring patients and the number of all 14-18 year old adolescents living in the 4 counties, this rate is 0.74/ 1000 adolescent inhabitants, that is: one psychiatrically treated adolescent with SIB per fifteen-hundred normal adolescents. The disorder represents 10.2% of all referred new patients but reaches 25.6% in the

population who are provided with psychopharmacological and psychotherapeutic treatment effectively. The realistic percentage of self-injury in a region far exceeds the rate perceived by the health facilities (foster cares, "mild" cases getting no medical or psychiatric treatment etc.).

## DISCUSSION

The majority of self-injuring adolescents suffer from an episode of major depression and/or from anxiety disorder often in comorbidity with suicidal behaviour. In this aspect we can confirm the results of numerous authors who argue for the importance of affective disorders as highly comorbid with self-injurious behaviour (Ghaziuddin et al. 1992, Guertin et al. 2001, Matsumoto et al. 2004, Pattison & Kahan 1983). Conduct disorder problems are not typical, but anxiety problems are more frequent than is expected. SIB is an inadequate form of self treatment for depression, is of either impulsive or of „planned” nature and substitute activities to divert self-destructive thought are infrequently used. We failed to find other authors presenting this „two phase type” of SIB. Conduct disorder i.e. externalizing pathology was less pronounced in the Hungarian sample. There is evidence pointing out increased aggression and behavioural problems among both self-injuring adults and adolescents (Ayton et al. 2003, D’Eramo et al. 2004, Laye-Gindhu & Schonert-Reichl 2005, Matsumoto et al. 2004, 2005a, 2005b), the incidence rate seeming to be dependent on the recruitment of the sample. We found that our clinical sample has worse characteristics of risk behaviour compared with those of a normative sample of adolescents with self-injury. The high rates of occurrence and of therapeutic need of self-injurious patients in Hungarian child psychiatric care centres underscore the importance of the self-injurious behaviour not only as a research objective but as an issue worth dealing with from a broader child health care perspective.

**Limitations.** These are Cross-sectional studies. The school sample is dominated by boys, which is not typical of self-injuring samples. This is a regional-representative sample not reflecting Eastern-Hungarian relationships. These are descriptive statistics of the clinical population without investigating the interrelationships among the factors of self-injurious behaviour.

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