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ELSEVIER MASSON
EUROPEAN PSYCHIATRY
European Psychiatry xxx (2009) xxx–xxx

Original article

Self-injurious behavior among Greek male prisoners: Prevalence and risk factors

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Received 5 February 2009; received in revised form 17 July 2009; accepted 31 July 2009

Abstract

Background: Self-harm among prisoners is a common phenomenon. This study aims to estimate the prevalence of self-injurious behavior (SIB) among Greek male prisoners, record their motives and determine independent risk factors.
Methods: A self-administered, anonymous questionnaire was administered to 173 male prisoners in the Chalkida prison, Greece. The questionnaire included items on self-harm/SIB, demographic parameters, childhood history, family history, physical and mental disease, lifestyle and smoking habits, alcohol dependence (CAGE questionnaire), illicit substance use, aggression (Buss–Perry Aggression Questionnaire [BPAQ] and Lifetime History of Aggression [LTHA]), impulsivity (Barrat Impulsivity Scale-11) and suicidal ideation (Spectrum of Suicidal Behavior Scale). Univariate nonparametric statistics and multivariate ordinal logistic regression were performed.
Results: Of all the participants, 49.4% (95% CI: 41.5–57.3%) disclosed self-harm (direct or indirect). The prevalence of SIB was equal to 34.8% (95% CI: 27.5–42.6%). Most frequently, SIB coexisted with indirect self-harm (80.7%). The most common underlying motives were to obtain emotional release (31.6%) and to release anger (21.1%). At the univariate analysis, SIB was positively associated with a host of closely related factors: low education, physical/sexual abuse in childhood, parental neglect, parental divorce, alcoholism in family, psychiatric condition in family, recidivism, age, sentence already served, impulsivity, aggression, alcohol dependence, self-reported diagnosed psychiatric condition and illicit substance use. Childhood variables were particularly associated with the presence of diagnosed psychiatric condition. At the multivariate analysis, however, only three parameters were proven independent risk factors: self-reported diagnosed psychiatric condition, illicit substance use and aggression (BPAQ scale).
Conclusion: The prevalence of SIB is particularly high. Psychiatric condition, illicit substance use and aggression seem to be the most meaningful risk factors; childhood events seem only to act indirectly.

Keywords: Self-injurious; Prisoners; Greece; Psychiatric; Child abuse; Aggression

1. Introduction

Self-harm is a broad notion describing acts at the antipodes of self-care, as described by Claes and Vandereycken. Self-harm may be direct or indirect, may entail the intention to die (consequently referred to as suicide attempt) or not [8]. Self-injurious behavior (SIB) is a term defined as ''direct'' self-harm acts ''without'' the intention to die [8,4,44]. SIB may be severe or not; severe SIB cases, such as eye enucleation, castration and amputation of body parts have been defined as self-mutilation (SM). SIB is one of the most perplexing clinical phenomena and acts of SM vary greatly and depend on the imagination of the self-mutilator. It may include cutting, burning, inserting objects, head banging, interfering with wound healing or hitting oneself [4]. It is obvious that despite the lack of direct intent to commit suicide, repetition of such acts may be extremely dangerous or even lethal.

Several studies have been conducted concerning prevalence, mode and motives of SIB and SM in the general population [4,13,27], psychiatric population [4,24,17], adolescents and children [17,34,36]. High rates of major depression, anxiety, substance abuse, posttraumatic stress disorder, eating disorders, schizophrenia [44], dissociative disorder [4], impulse control disorders, mental retardation and other organic conditions [39] have been observed among self-mutilators. SIB may also be found in patients with diagnosis of personality disorders [23]

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doi:10.1016/j.eurpsy.2009.07.014

especially antisocial personality disorder [40] and borderline personality disorder [38,3].

SIB among prisoners is a quite common phenomenon [3,18]. Inmates have been shown to engage in such activities more frequently that the general or psychiatric population [14,28]; as a result, efforts have been recently made to detect self-harm behavior in prisoners through special tools [31]. Nevertheless, the risk factors for SIB in prison remain an open field, as SIB seems to integrate a host of factors. Psychiatric conditions, such as presence of Axis II borderline personality disorder [43], borderline, negativistic and antisocial disorders may predict deliberate self-harm in male offenders [29]. History of being a victim of violence (physical assault, sexual assault and violence from family and friends) correlates with self-harm in female prisoners [3]; maltreatment seems to do so in male offenders [29]. Interestingly enough, drug [43,5] and alcohol abuse [3,5] have been also associated with self-harm in prison. Assessing whether all the above, occasionally reported, factors are capable of mediating independent effects upon SIB prevalence in prison is a research question of considerable importance.

A high prevalence of psychiatric disorders (including deliberate self-harm) has been shown among Greek prisoners [15]. The problem becomes even more complicated by the fact that prison doctors in Greece have little or no psychiatric training and a regular and close follow-up by mental services and psychiatrists is not provided. Moreover, such acts are often considered as ''manipulative'' and are underestimated.

Under the light of the above, the aim of our study is:

- to estimate the prevalence of SIB among male prisoners;
- to record their motives and;
- to determine independent risk factors for SIB in prison.

Sociodemographic factors, early childhood events, personality traits, alcohol and substance abuse, as well as prison-related variables are evaluated, in an attempt to globally assess the intricate underlying associations.

2. Subjects and methods

2.1. Setting and subjects

The Chalkida prison, where this survey was conducted, is a male remand and sentence prison located in Central Greece. Prisoners have been convicted for a wide range of offences and the sentences range from a few months to life imprisonment. Reported (from the prisoners) reasons of their admission consisted of murder or serious injury (17, 10.4%), theft or robbery (57, 34.7%), fraud (38, 23.2%), illegal drugs (38, 23.2%) and other (14, 8.5%). Prisoners may be transferred there, as in any other Greek prison, from any geographical area in Greece. Approval from the Ministry of Justice was obtained for the survey.

2.2. Structure of the questionnaire

A self-administered, anonymous questionnaire, taking between 20 and 30 minutes to complete, was administered to 173 prisoners. Written informed consent was obtained before the administration of the questionnaire. The purpose of the study was thoroughly described and the voluntary nature of participation emphasized as part of the consent procedure. The participants were also informed that they could stop their participation at any time and that there were no prison-related benefits or penalties for their participation. The prison doctor was responsible for the whole procedure, as well as for the maintenance of the confidentiality. In case that a prisoner was not able to read and fill in the questionnaire himself (because he was an analphabet or a foreigner), the questionnaire was filled in by the prison doctor after a face-to-face interview.

The questionnaire included items on:

- sociodemographic parameters (sex, age, marital status, education and ethnicity);
- childhood history, family history, physical and mental disease, lifestyle and smoking habits;
- alcohol dependence and illicit substance use (ever-use) and;
- aggression, impulsivity, suicidal ideation and self-harm.

More specifically, alcohol dependence was estimated by using the ''CAGE questionnaire'', a brief screening instrument containing four short questions:

- have you ever felt you should *cut* down on your drinking?
- have people *annoyed* you by criticizing your drinking?
- have you ever felt bad or *guilty* about your drinking? and;
- have you ever had a drink in the morning to get rid of a hangover (*eye*-opener)?

The CAGE questionnaire (CAGE: acronym formed from the words cut-annoyed-guilty-eye) was developed from a clinical study performed in 1968 by Ewing at the North Carolina Memorial [12]. The score was created, as follows: each item can have either a ''yes'' or ''no'' response. If the answer was ''yes'', one point was added; in case the answer was ''no'', no points were added. Consequently, the resulting score ranged between 0 and 4. CAGE has demonstrated high test-retest reliability (0.80–0.95) and adequate correlations (0.48–0.70) with other screening instruments. The questionnaire is a valid tool for detecting alcohol abuse and dependence, especially in medical and surgical inpatients, ambulatory medical patients and psychiatric inpatients (average sensitivity 0.71, specificity 0.90) [10].

Hostility and aggression was assessed by using the Buss–Perry Aggression Questionnaire (BPAQ), a 29-item questionnaire containing brief statements (e.g., sometimes I can't control my urge to strike another person) to which a number ranging from 1 to 5 should be assigned (1 = Not like me at all and 5 = A lot like me). Retest reliability for the BPAQ over 9 weeks is also satisfactory (correlations ranged from 0.72 for anger to 0.80 for the total score [7]). Construct validity for the Buss–Perry questionnaire is supported, to some extent, by its relative associations with other self-report measures of personality traits [7,16,20].

The Brown–Goodwin Lifetime History of Aggression (LTHA) subsumes nine questions concerning aggression

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expressed towards others (by physical or verbal assault) and antisocial behaviors involving disciplinary action in school or work, with and without police contact. Each question was scored on a 4-point scale; the interrater reliability is high ($r > 0.98$) [6]. Internal consistency estimates have been shown excellent overall (alpha = 0.88 for the informant version) [11].

Impulsivity was assessed by using the Barrat Impulsivity Scale –BIS-11, a 30-item scale with a four-point scale (1 = Rarely/Never, 2 = Occasionally, 3 = Often, 4 = Almost Always/Always) [2]. Patton et al. report internal consistency coefficients for the BIS-11 total score that range from 0.79 to 0.83 for separate populations of undergraduates, substance abuse patients, general psychiatric patients and prison inmates [30].

The Spectrum of Suicidal Behavior Scale (SSBS) [32] is a five-item clinician-rated scale used to assess suicidal behavior on a continuum from no suicidal thoughts or behaviors to serious suicide attempts. Each participant's score on this scale is determined by the highest degree of documented suicidal tendency. The SSBS has been shown to have high interrater reliability [32]. The SSBS was completed with reference to suicidality exhibited during the current incarceration.

For the assessment of SIB, the participant was asked if he had been involved in the following six types of SIB:

- interfering with wound healing;
- scratching;
- hitting his head;
- piercing of skin;
- burning and;
- wrist-cutting.

Moreover, the participant was asked whether he had ever committed the following two indirect self-harm actions: drug overdosing and starving. Additional questions about the motives were asked: ''Which of the following is the most common reason why you harm yourself? (a) want to die, (b) out of anger, (c) to spite your lover or parents, (d) to obtain emotional release, or (e) ''other''. In case a subject disclosed that he wanted to die [motive (a)], he was considered suicidal and was thus not classified as self-injurious, (the classification by Claes and Vandereycken [8]).

Based on the six items on SIB, a score was created, as follows: one point was allocated to each yes/no item; in case a responder answered ''yes'', the point was added to his score, whereas no points were added if the answer was ''no''. As a result, the score ranged between 0–6, with 0 denoting no SIB and 6 denoting a participant having proceeded to all types of SIB.

2.3. Calculation of response rates and statistical analysis

For the calculation of response rates, the American Association for Public Opinion Research (AAPOR) Guidelines was adopted. Questionnaires with >80% items completed were considered complete and those with 50–80% items filled in were characterized as partial responses; both complete and partial responses were suitable for further analysis. On the contrary, questionnaires with less than 50% of items completed were considered break-offs and were consequently not included in the subsequent analysis [1].

The SM score was treated as the main outcome of the analysis. In order to detect covariates significantly associated with SM behavior, univariate analysis was performed through non-parametric statistics (Mann–Whitney–Wilcoxon test for independent samples or Spearman's rank correlation coefficient), due to significant deviation from normality. Where appropriate, the associations between covariates are reported in the results' section.

Multivariate analysis (multivariate ordinal logistic regression) was subsequently performed; the factors that were significantly associated with the SM score at the univariate analysis were included as independent variables. The SM score was set as the dependent variable; in the final model, after mutual adjustment, only the statistically significant variables were included (backward selection statistical procedure). The satisfaction of the proportionalityof odds assumption was evaluated by the appropriate likelihood-ratio test. The backward analysis (i.e. analysis beginning with the full model and eliminating one-by-one the variables proven non-significant, so as to arrive at the final model) was performed given its validity and parsimony in the context of closely associated risk factors [33].

Statistical analysis was performed with STATA 8.0 statistical software (Stata Corporation, College Station, TX, USA).

3. Results

Among 173 questionnaires, nine break-offs occurred, resulting in a response rate equal to 164/173 (94.8%). Among the 164 responders, 81 (49.4%, 95% CI: 41.%−57.3%) reported self-harm acts. Ten subjects (10/164, 6.1%, 95% CI: 3.0%–10.9%) disclosed self-harm with suicidal intent, whereas 14 subjects (8.5%, 95% CI: 4.7%–13.9%) disclosed solely indirect self-harm (seven subjects disclosed drug overdosing and seven subjects disclosed starvation); as a result, the prevalence of SIB was equal to 34.8% (57/164, 95% CI: 27.5%–42.6%). Most frequently, SIB coexisted with indirect self-harm (46/57, 80.7%). The above are graphically depicted in the flow chart of the study (Fig. 1). As mentioned above, the subjects disclosing self-harm with suicidal intent or solely indirect self-harm were not included in the analysis; consequently, the analysis was based on 140 (83 + 57) subjects.

Hitting oneself's head was the predominant type of SIB (35/57, 61.4%). The frequencies of other SIB types were: wrist-cutting 33/57 (57.9%), piercing of skin 32/57 (56.1%), scratching oneself 25/57 (43.9%), interfering with wound healing 24/57 (42.1%) and burning oneself 15/57 (26.3%). Regarding the underlying motives, participants disclosed that they wanted:

- to obtain emotional release (18/57, 31.6%);
- to release their anger (12/57, 21.1%);

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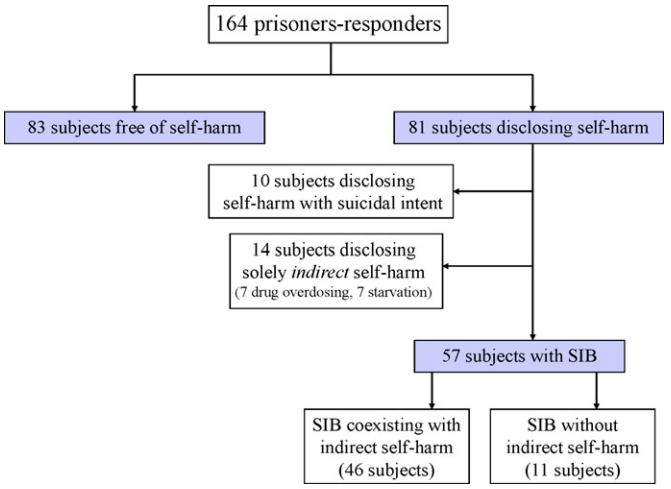

Fig. 1. Self-harm and SIB among prisoners-responders.

- to spite their lover or parents, (1/57, 1.8%);
- other (26/57, 45.6%); specifically: withdrawal syndrome (1), blackmail (2), fill a gap (1), undetermined (22).

The SIB score was equal to 1.2 ± 1.8 (median: 0). Age (mean $\pm$ SD) was equal to 41.9 ± 13.0 (median: 41) years. The duration of sentence was 15.8 ± 21.3 months (median: 10 months), whereas the duration of sentence already served was 2.9 ± 2.9 months (median: 2 months). The BPAQ score was 70.1 ± 22.0 (median: 71), the BIS-11 score 60.8 ± 14.3 (median: 58.5), the CAGE questionnaire 1.1 ± 1.1 (median: 1), the LTHA score 4.1 ± 5.0 (median: 2), whereas the SSBS score was 2.1 ± 1.7 (median: 2).

At the univariate analysis, SIB (score) was positively associated with recidivism, physical abuse in childhood, parental neglect in childhood, parental divorce, alcoholism in family, psychiatric condition in family, sexual abuse in childhood, diagnosed psychiatric condition, illicit substance use, sentence already served, BPAQ score, BIS-11 score, CAGE score, LTHA score, SSBS score and deterioration of smoking habits during prison (borderline association); on the contrary, the SIB score was negatively associated with education and age. No statistically significant associations existed between SIB score and nationality, marital status, duration of sentence. All associations implicating SIB score, as well as the respective descriptive statistics are presented in detail in Table 1. Regarding continuous variables, SIB score values are given after the categorization of the former into two categories: "<median", "≥median", for purely descriptive purposes.

Regarding the associations between categorical variables, it is worth reporting that the presence of diagnosed psychiatric condition was negatively associated with educational status and positively with recidivism, physical abuse in childhood, parental neglect, alcoholism in family, psychiatric condition in the family and illicit substance use. Concerning the continuous variables, it is worth mentioning that all BPAQ, BIS-11, CAGE and LTHA scores were strongly positively associated with each other. It is also worth mentioning that the above four, closely correlated scales were positively associated with illicit substance abuse (data not shown). Evidently, the above denoted that significant collinearity existed between the

Table 1
Associations between self-injurious behavior (SIB) (score) and study variables. Results from univariate analysis.

Categorical and ordinal variables	*n* (%)	SIB (score)	*p*-value
Educational status			<0.001[a]
Analphabet	6 (4.6)	2.3 ± 2.7	
Primary school	24 (18.3)	1.8 ± 2.0	
Secondary school	36 (27.5)	1.5 ± 1.9	
High school	35 (26.7)	0.6 ± 1.1	
University	30 (22.9)	0.3 ± 1.1	
Recidivism			<0.001[b]
Yes	42 (40.8)	2.2 ± 2.0	
No	61 (59.2)	0.6 ± 1.3	
Physical abuse in childhood			<0.001[b]
Yes	25 (20.2)	2.9 ± 1.9	
No	99 (79.8)	0.7 ± 1.4	
Parental neglect in childhood			<0.001[b]
Yes	24 (18.6)	2.9 ± 2.0	
No	105 (81.4)	0.7 ± 1.4	
Parental divorce			<0.001[b]
Yes	32 (23.9)	2.1 ± 1.9	
No	102 (76.1)	0.8 ± 1.6	
Alcoholism in family			<0.001[b]
Yes	17 (12.5)	2.5 ± 2.0	
No	119 (87.5)	0.9 ± 1.6	
Psychiatric condition in family			<0.001[b]
Yes	10 (7.5)	3.1 ± 2.1	
No	124 (92.5)	1.0 ± 1.6	

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Table 1 (*Continued*)

Categorical and ordinal variables	*n* (%)	SIB (score)	*p*-value
Sexual abuse in childhood			0.047[b]
Yes	2 (1.5)	3.5 ± 2.1	
No	131 (98.5)	1.1 ± 1.7	
Diagnosed psychiatric condition			<0.001[b]
Yes	30 (24.4)	3.0 ± 2.0	
No	93 (75.6)	0.5 ± 1.2	
Illicit substance use			<0.001[b]
Yes	46 (37.7)	2.7 ± 1.9	
No	76 (62.3)	0.3 ± 0.8	
Changes in smoking habits during prison			0.095[b]
Less frequent smoking/ceasing	17 (13.6)	1.2 ± 1.8	
No change	54 (43.2)	0.8 ± 1.4	
More frequent smoking/began in prison	54 (43.2)	1.7 ± 2.0	
Continuous variables			
Age			<0.001[a]
<median	68 (49.6)	1.6 ± 1.9	
≥median	69 (50.4)	0.7 ± 1.5	
Sentence already served			0.022[a]
<median	46 (36.5)	0.7 ± 1.2	
≥median	80 (63.5)	1.5 ± 2.0	
BPAQ score			<0.001[a]
<median	64 (49.6)	0.4 ± 1.1	
≥median	65 (50.4)	2.0 ± 2.0	
BIS-11 score			<0.001[a]
<median	66 (50.0)	0.6 ± 1.4	
≥median	66 (50.0)	1.7 ± 1.9	
LTHA score			<0.001[a]
<median	58 (46.0)	0.3 ± 0.8	
≥median	68 (54.0)	1.8 ± 2.0	
CAGE score			<0.001[a]
<median	53 (38.4)	0.6 ± 1.3	
≥median	85 (61.6)	1.6 ± 1.9	
SSBS score			0.037[a]
<median	64 (46.7)	1.0 ± 1.7	
≥median	73 (53.3)	1.3 ± 1.9	

BPAQ: Buss–Perry Aggression Questionnaire; BIS-11 score: Barrat Impulsivity Scale-11; LTHA: Lifetime History of Aggression; SSBS: Spectrum of Suicidal Behavior Scale.

[a] *p*-derived from Spearman's rank correlation coefficient.

[b] *p*-derived from Mann–Whitney–Wilcoxon test for independent samples.

aforementioned scores in the studied sample; this should be kept in mind for the optimal interpretation of the results of the multivariate analysis.

The results of the multivariate analysis are presented in Table 2. After the backward selection of covariates, only three were retained in the final ordinal logistic regression model. The presence of diagnosed psychiatric condition, illicit substance use and higher BPAQ score were all independently associated with higher SIB score.

4. Discussion

Our study showed an impressively high prevalence of SIB among male prisoners (34.8%); the overall prevalence of self-

Table 2
Variables retained in the multivariate logistic regression analysis (backward selection), with their respective ORs.

Variable	Category or increment	OR	*p*-value
Diagnosed psychiatric condition	Yes vs. No	8.3 (2.8–24.9)	<0.001
Illicit substance use	Yes vs. No	11.1 (3.7–33.2)	<0.001
BPAQ score	1 point increase	1.04 (1.01–1.07)	0.002

BPAQ: Buss–Perry Aggression Questionnaire.

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harm acts was even higher, as nearly one of two subjects reported self-harm. The prevalence of self-harm is in accordance with previous studies performed in inmate populations [3,18,25]; indeed, inmates have been shown to engage in self-harm activities more frequently than the general or even psychiatric populations [39,14,28]. Importantly, our study demonstrates that SIB may well coexist with indirect self-harm; the coexistence of SIB and indirect self-harm seems to predominate, as solely a small subset of cases pertained to pure SIB without indirect self-harm.

The most common reasons for SIB were ''for obtaining emotional release'' and ''out of anger''; these are in concordance with previous studies identifying emotional distress, tension and anger relief as the most common reasons reported for non-suicidal self-harm [6,42]. Greater levels of anger, loneliness and dysphoria have been noted for individuals with SIB history, exacerbated prior to SIB acts [23,19]; the reduction in tension increases the likelihood of its occurring again and becoming a regularly used coping mechanism, ''release mechanism''. On the other hand, our study is not in line with another rationale suggested for SIB among incarcerated individuals, according to which the latter may deliberately harm themselves for reinforcing benefits, receiving more attention, disrupting the daily routine or being taken to the hospital or mental health centres [6]. It seems that SIB in prison is a behavior with more profound and complex etiology, being far from the rather opportunistic need for benefits.

Consistent with previous research [4,41,46], our results derived from univariate analysis suggested that SIB is associated with a host of closely related factors, such as childhood physical abuse, neglect, parental divorce, alcoholism in family and psychiatric condition in family. Life events have been demonstrated to be important in the etiology of self-harm, mainly in predisposed individuals [13,41,9,26], particular attention has been drawn upon childhood within the context of the care-giving relationship [17]. With respect to the underlying mechanisms, it has been suggested that children in highly stressful environments (exposure to trauma, lack of secure attachment and neglect) may use SIB to communicate with others and to regulate their own feelings, a situation that continues in their adult life [41,35].

However, the results of the multivariate analysis pointed to a much more parsimonious profile of SIB; self-reported diagnosis of a psychiatric condition seems to be one of the most meaningful risk factors. Noticeably, none of the above, childhood events-related factors retained their statistical significance; interestingly enough, they all were found to be associated with diagnosed psychiatric condition. As a result, it seems that early family events do not act as independent risk factors for the appearance of SIB but they rather represent a kaleidoscope exerting indirect effects upon SIB, most probably through psychiatric conditions in adulthood. Importantly, a similar loss of statistical significance concerning childhood abuse in the multivariate analysis was also found by Hawton et al. [22]. By far, the most commonly cited diagnosis in adult psychiatric inpatient self-mutilators is borderline personality disorder (BPD) [14,42], which may in turn be associated with episodes of impulsive, aggression, self-injury and drug or alcohol abuse [44]. Nevertheless, our study design did not comprise a thorough psychiatric assessment on an individual base; therefore, any assumption regarding the prevalence of BPD or other psychiatric disorders in particular in our sample would be precarious.

Aggression, as quantified by the BPAQ scale, emerged as a significant, independent risk factor for SIB. Nevertheless, BPAQ seems only to be the most meaningful face of the underlying cube; given the close associations between scales, impulsivity, aggression and alcohol dependence appear as intimately intertwined partners. As a result, the analysis portrayed BPAQ as the most representative marker-risk factor of an impulsive, aggressive and alcohol-dependent individual. Impulsivity by itself has been reported as an independent factor for self-harm [22,37]. Concerning alcohol, our results seem in line with the study by Hawton et al. [21], who supported that alcohol may indirectly influence the occurrence of self-harm through contributing to interpersonal and other problems, exaggerating individual's reactions to them and aggravating impulsivity and aggression in a vicious circle.

Our study also highlighted illicit substance abuse as an important, independent contributor to the phenomenon of SIB. Many previous studies have also found association between self-harm and psychoactive substance use [28,45], although many self-mutilators deny engaging in SIB while under the influence of a substance [13]. Importantly, our study is in accordance with previous work conducted in the context of prison, which have underlined the importance of illicit substance abuse as a risk factor for self-harm [43,5]. It is worth mentioning that in our study, illicit substance abuse and alcohol dependence were significantly associated; in other words, they often coexisted.

Finally, our study bears several limitations. Psychiatric examination at an individual basis would be desirable, so as to specifically elucidate which conditions specifically underlie the self-reported psychiatric condition. In addition, the fact the doctor of the prison filled out the questionnaires for those patients who could not read may have been a source of bias for those subjects, given that self-injury often happens in secret; nevertheless, this pertained solely to the six analphabet subjects (Table 1). Consequently, this aspect seems not capable of interfering with the validity of the overall results presented in this study.

On the other hand, strengths of this study are the straightforward definition of SIB, as well as the clear-cut distinction made between SIB and indirect self-harm. In addition, the simultaneous examination of so many possible risk factors for SIB is far from any fragmentary approach; mutual adjustment and multivariate selection from a wide set of risk factors has permitted us to make the distinction between direct and indirect associations.

5. Conclusions

The prevalence of SIB is particularly high; SIB may frequently coexist with indirect self-harm. Diagnosed psychia-

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tric condition, aggression and illicit substance abuse are risk factors for SIB; childhood events seem only to act indirectly.

Prisoners should be routinely screened for SIB; this study may also help identifying and prioritizing on prisoner subpopulations at risk. For the above reasons, closer links between the prison and mental health service should be fostered in order to treat mental disorders effectively, prevent SIB and maintain adequate follow-up.

Acknowledgements

We would like to acknowledge the Greek Ministry of Justice for its permission to conduct the present study, as well as Spiridon Athanasiou (Warden of the Chalkida Prison) and Nikolao Palaiologo (Senior Paramedical Officer) for their support.

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