

Non-Suicidal Self-Injury in Latin America

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Artículo original

SUMMARY

Background

Non-Suicidal Self-Injury (NSSI) is defined as the intentional direct injury of the own bodily tissue without suicidal intent. In areas with a Caucasian majority population, such as the USA, Canada and Europe, it is a rapidly increasing phenomenon, especially among young people. However, from a European point of view, little scientific information is found on NSSI in Latin America.

Method

A study of English, Spanish and Portuguese literature on NSSI in Latin America was conducted using electronic search engines. During a ten-month period of field work in Belo Horizonte, Brasil, a systematic search was conducted of the international press, the popular local press, television broadcasts, Internet sites and blogs. Semi-structured elite interviews were conducted of academic professionals and practitioners. Spontaneous conversations on NSSI took place with local inhabitants.

Results

Three reasons for the authors' prior lack of success in finding publications on NSSI in Latin America could be distinguished: the gap between academic professionals, practitioners and inhabitant population, the language of the publications, and the existing confusion in terminology and research traditions regarding NSSI.

Conclusion

NSSI has a high prevalence in Latin America, which can be compared to that of the northern hemisphere. Although there are some differences in the ways of engaging in NSSI and in its functions, there are also important similarities. Scientific information on NSSI in Latin America remains difficult to find for researchers in other parts of the world. Therefore we advocate a consensus in terminology and suggest that all publications would provide English key words and would be included in international scientific databases to ensure a world-wide dissemination. An alternative is the construction of one centralized global Latin American database for Spanish and Portuguese publications.

Key words: Deliberate self-harm, non-suicidal self-injury, scientific databases, terminology.

RESUMEN

Antecedentes

La autolesión sin intención de suicidarse (NSSI) se define como un daño directo e intencional a los propios tejidos del cuerpo sin la intención de suicidarse. En zonas con población mayoritariamente caucásica, como Estados Unidos, Canadá y Europa, es un fenómeno en rápido aumento, especialmente entre los jóvenes. Sin embargo, desde el punto de vista europeo, se encuentra poca información científica acerca del NSSI en América Latina.

Método

Se desarrolló un estudio de la bibliografía en inglés, español y portugués acerca de NSSI en América Latina por medio de páginas electrónicas de búsqueda. Durante el estudio de campo en Belo Horizonte, Brasil, durante diez meses se llevó a cabo una búsqueda sistemática de información en los medios de comunicación. Entrevistas de elite semiestructuradas se realizaron a profesionales académicos y clínicos.

Resultados

Las autoras señalan que las causas por las que se ha encontrado poca información respecto a la NSSI en América Latina son: la brecha entre académicos profesionales, clínicos y habitantes en general; el idioma de las publicaciones y la confusión en la terminología y tradiciones de investigación concernientes a la NSSI.

Conclusión

La incidencia de NSSI en América Latina es tan alta que se puede comparar con la del hemisferio norte. Aunque hay algunas diferencias en las formas de NSSI y las funciones que cumple en América Latina, también hay importantes similitudes. La información científica sobre NSSI en América Latina sigue siendo difícil de encontrar para los investigadores en otras partes del mundo. Por lo tanto, es necesario un consenso sobre la terminología y se sugiere que todas las publicaciones utilicen palabras clave en inglés y que se incluyan artículos en las bases de datos científicas internacionales para asegurar una difusión mundial de la información. Una alternativa sería construir una base de datos global centralizada para todas las publicaciones en lengua española y portuguesa.

Palabras clave: Autoagresión deliberada, autolesión, bases de datos científicas, terminología.

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INTRODUCTION

Non-Suicidal Self-Injury (NSSI) is defined as the intentional direct injury of the own bodily tissue without suicidal intent.¹ It is also known as deliberate self-harm (DSH), and is distinguished from suicide attempts and ritually or culturally sanctioned body modification (e.g. piercings).² Depending on research groups, DSH can refer to self-harming behavior in the absence of suicidal intent^{3,4} or self-harming behavior without ascribing intent.^{5,6} In areas with a Caucasian majority population, such as the USA, Canada and Europe, it is a rapidly increasing phenomenon, especially among young people in puberty and adolescence, and many studies on the subject are published in the international scientific literature. In sharp contrast, little is found on NSSI in Latin America. This puzzled the authors because, from a 1996 newspaper clipping by Schemo,⁷ we knew of the high NSSI prevalence among homeless girls at Passage House, a day program for street children in Recife, Brazil.

METHOD

In 2011, the first author spent a period of ten months in Belo Horizonte, Brazil, part of which was dedicated to fieldwork on NSSI. Belo Horizonte is the capital of the Minas Gerais state, Brazil. It is one of the largest cities of the country with little foreign influence. There is little inflow from immigrants, and ecotourism flourishes only in the inland of the state. Traditional values of family, religion and hard work are present everywhere in this ten-million inhabitants city which still fosters a lot of countryside characteristics. During this period of field work, a systematic search on NSSI in Latin America was conducted of the international press as well as the popular local press, television broadcasts, Internet sites (ASeFO; Ligaçãoteen) and blogs. Semi-structured elite interviews^{8,9} were conducted of several first-aid attendants, two psychologists in a psychiatric hospital, one independent psychologist and one professor in clinical psychology, all situated in Belo Horizonte. Spontaneous conversations on NSSI took place with local inhabitants whenever the opportunity arose.

Based on this fieldwork, the authors could distinguish three reasons for our prior lack of success in finding publications on NSSI in Latin America: the gap between academic professionals, practitioners, and inhabitant population, the language of the publications, and the confusion between terminology and research traditions.

The gap between academics professionals, practitioners and inhabitant population

Maldonado¹⁰ literally states that in most countries NSSI is still a taboo, and that Latin America and his homeland Ecuador are no exception to this observation. Patients will rather

consult friends, family or members of the clergy to talk about the problem instead of seeking professional help from doctors, psychiatrists or psychotherapists. After discovery of NSSI the patient's family seldom seeks professional help because of the patient's wish to keep the matter a secret. This attitude might be the result of the strong ties with family and religion that reign most parts of Latin America.¹¹ At the same time, these strong ties with family and religion can also work stifling, especially when problems concerning sexuality and same sex attraction are concerned.

In Belo Horizonte, NSSI previously occurred on the intake list of first aid stations, but was later removed because of the apparent low prevalence. Whenever someone was treated for self-inflicted injuries, the patient either withheld information about their cause or lied about it. The fact that the injuries were self-inflicted was evidenced by the type of wound or because of inconsistencies in the story. Injuries that necessitated medical attention were subsequently listed as a suicide attempt. A poll among the middle class population in Belo Horizonte revealed that adults quickly deny the existence of self-inflicted injury without suicidal intent, although they are aware of youngsters deliberately hurting themselves without viewing this in the light of psychopathology or abnormal behavior. The interviewed academic psychologists in the region only were aware of psychotic self-injuring behavior and genital mutilation. Psychologist practitioners in the field knew about the occurrence of NSSI and could give examples from patients of all ages but especially youngsters. They were not aware, however, that literature existed on non-psychotic self-injuring behavior without suicidal intent. Most of the youngsters themselves were well-acquainted with the phenomenon and often could give examples from among their peers. Some admitted having engaged in NSSI, after which they quickly diverted attention away from themselves.

The taboo on NSSI causes a gap between academic professionals and inhabitant population, resulting in few Latin American publications on NSSI. At the moment there is however an inclination to break through this taboo. Research is initiated, prevention campaigns against different types of "suicidal behavior" are run, newscasts on public television are broadcasted to sensitize the population, and special websites and blogs that discuss NSSI are erected.

The language of the publications

In order to find information on NSSI in Latin America, we initially used search engines (Google Scholar, Web of Science, Scielo, PubMed) within the international scientific literature, which provided us with hardly any results. The reason is that Latin American scientific publications are mostly written in Spanish and in Portuguese, while most of the international scientific press is written in English. This leads to a lesser dissemination because, although an English

abstract is usually provided, these publications are harder to find in the large international databases that use English as a main language. Instead, these Spanish and Portuguese publications are disseminated across different Latin American databases, with many papers that are only accessible on the website of the respective university¹² or medical institution.^{10,13} Subsequently, up-to-date information could also be found through newscasts and the popular press.¹⁴

Terms used in Portuguese are: *autoflagelação*, *auto-des-termino*, *lesões voluntários*, *autolesão*, *escoriação psicogênica*, *condutas autolesivas*, and *comportamentos autolesivos*. Terms used in Spanish are: *lesiones autoinfligidas deliberadamente* (LAD), *autolesionar*, *autodestructivo*, *comportamiento autolesivo* (CAL), *flagelación*, *autoagresión*, *autodaño*, *síndrome de automutilación* (SAM), *automutilación*, and *comportamiento autodestructivo indirecto* (CADI) for behaviors where the inflicted damage occurs indirectly.

The confusion in terminology and between research traditions

As was already mentioned, in prevention campaigns NSSI is seen as part of suicidal behavior. On the other hand, on the Internet and in news broadcasts it is stressed that people injuring themselves usually do not have a suicidal intent. On the contrary, NSSI is seen as a means to stay alive. Also in Latin American scientific literature, NSSI sometimes is included under parasuicidal behavior or it is considered as part of deliberate self-harm (DSH) without ascribing intent.¹⁵⁻¹⁷ This may lead to some counterintuitive results. For example, Villalobos-Galvis¹⁸ speaks of suicidal behaviour, although 60% of the interviewed patients had no conscious intentions to die as a result from their self-harming behaviour. Most Latin American authors, however, describe self-harming behavior without suicidal intent.¹⁹⁻²² Arcoverde & Amazonas¹² more specifically mention self-harming behavior without *conscious* suicidal intent in conformity with the definition by Favazza.²

This reflects two research traditions that exist in the northern hemisphere. Depending on research groups, DSH can refer to self-harming behavior in the absence of suicidal intent^{3,4} or self-harming behavior without ascribing intent.^{5,6} In this latter sense the term will also include suicide attempts. While the first research group has a northern American background, the second group originated in the UK and was adopted by the countries under its historical sphere of influence. On the European mainland both trends are adhered. The difference between both is rooted in the history of DSH research. For a long time NSSI was considered equal to a suicide attempt.²³ Both differ however in underlying motivation, lethality, age of first onset and interpersonal meaning.²⁴ In contrast to NSSI, which is applied to feel better, suicidal behavior is characterized by the intent to die and by a much larger lethality.^{25,26} As to the underlying motivation, suicide attempts are often explained by the

patient out of the desire to no longer be a burden on others. In contrast, NSSI is attributed to a large scale of –often multiple– functions,²⁷ with a minimal interpersonal involvement.²³ The relief of negative affect that occurs after NSSI remains absent after a failed suicide attempt.²⁴ This attests that the act of injuring oneself is sufficient to fulfilling a certain need, whereas a suicide attempt per definition signifies a failing of purpose. In contrast to a suicide attempt, NSSI also seems more strongly related to anxiety than to depression.²⁸ Self-harmers report fewer depressive symptoms and lower levels of suicidal ideation, and have more positive attitudes toward life than persons who undertake a suicide attempt.^{26,29} Only a small percentage of people that harm themselves actually commit suicide later on.³⁰

Walsh,³¹ moreover, points to an important difference in the method used. Whereas most self-harmers cut themselves, cutting is only used in 1.4 % of suicides and suicide attempts in the US. When someone cuts with the aim to die, they mostly cut the neck thereby severing the carotid artery or the jugular vein. Self-harmers, however, tend to cut the fleshy parts of the extremities or the abdomen instead of the neck. Other studies report similar differences in the method used between NSSI and suicide attempts.²⁷ Self-harmers usually tend to use multiple methods which seldom require medical attention. In a sequence of suicide attempts mostly one method with a large lethality is chosen, which almost always requires medical intervention. Also the age of onset differs. NSSI tends to start in early adolescence and has an average –usually chronic– course of ten to fifteen years, although this can vary from one year to several decades. Suicide attempts usually start at a later age and occur notably less frequently.²⁶

Due to the many observed differences between both, there is a consensus that NSSI has to be differentiated from suicide attempts:^{23,24,26-28,31-34} “*The absence of a suicidal intent is now fundamental to the distinction between self-harming behavior and suicidality*”.³⁵ Also persons engaging in NSSI themselves make a clear distinction themselves between suicidal and self-injuring behaviour.^{29,36,37} In practice, however, part of the confusion remains, especially concerning the measurements and registration of incidences of NSSI.

The reason for this disagreement on terminology is that on the one hand most authors have extensively argued that NSSI and suicide attempts are two related but distinctive phenomena, as became clear in the preceding paragraphs. On the other hand, some authors view suicidal intent as a dimensional phenomenon,⁵ based on the observation that NSSI is associated with an elevated risk for suicide, and because the motives for DSH are not readily discerned.³⁸ This sometimes leads to counterintuitive situations, which can be exemplified by the expression “Suicide with the motive ‘to die’ or ‘not to die’”.³⁹ In a study of “survivors of suicidal self-poisoning”, these authors discovered that only 36.5% of the patients carried out their attempt with the intent to die. In order to solve this terminology confusion, Silverman et al.⁴⁰ proposed a

new nomenclature in which they make a difference between suicide attempts and self-injury based on the presence or absence of suicidal intent. Despite a number of advantages, this new nomenclature never seemed to have caught on. The term non-suicidal self-injury (NSSI) made its appearance at the beginning of this century and is gaining ground ever since. Therefore it will be used throughout this article.

Prevalence data and correlates of NSSI in Latin America

Until 2010 information on NSSI prevalence was very difficult to find in Latin America. Since then more data are available in five countries: Argentina, Brazil, Colombia, Ecuador and Mexico, which are all countries that score high on the Human Development Index. They are not the only countries that score high on this ranking, yet from the other areas little or no information seems to be available. Because of the large geographical area one should also take into account the different counties within each country. A country like Brazil, for example, has a mixed population from county to county. Also countries in the north of Latin America will have a different population from countries in the outmost south. Therefore the experts that were interviewed stressed the importance of ethnicity, because of its association with psychosocial and economic factors that influence health and well-being.

Hora 21, a Mexican news program, mentions in 2012 a NSSI prevalence of 15% among 12- to 18-year olds in Mexico. A blog from Colombian university alumni reports that, among patients that direct themselves to first aid stations, 11.7% have self-inflicted cuts, while in prisons and hospitals the prevalence is 17.5%.⁴¹ C5N, a newscast from Argentina, reports that, despite the absence of official prevalence data, the country has one clinic specialized in NSSI where a rapid increase of the problem is noticed. In the newspaper clipping by Diana Schemo,⁷ a prevalence rate of 50% or higher is estimated among homeless girls and women.

In Latin America the same forms of self-injuring behavior are observed as in North America and Europe, such as scarring, cutting and burning. Besides these forms, what is typical for Latin America is white phosphor intoxication by means of the indigestion of firecrackers.⁴² This kind of NSSI is observed in Ecuador, Colombia and Venezuela. Based on the expert interviews of first-aid doctors, psychiatrists and psychologists, trichotillomania seems to occur regularly and to such an extent that medical care is necessary. Comparable to the U.S. and Europe, associations are observed between NSSI and eating disorders^{16,22} and between NSSI and personality disorders such as borderline personality disorder.⁴³ An underestimated group are the homeless. Research in both North America and Latin America has proven that the social circumstances of being homeless heightens a person's risk of experiencing mental problems and a subsequent risk of engaging in NSSI,^{7,44} with up to 69% of homeless youths

having engaged in NSSI at least once in a lifetime rate in the Midwest of the US.⁴⁵

Most Latin American authors see NSSI as a form of self-help fulfilling an affect-regulation function, in which self-harm is a way to alleviate negative affect. According to Nock and Prinstein's four-dimensional model,⁴⁶ this coincides with a negative automatic reinforcement function, which is also the most prevalent function NSSI fulfills in the US and Europe. Positive interpersonal reinforcement is a less prevalent function in the US and Europe. In Latin America, on the contrary, this function in which one engages in NSSI to receive attention or help seems to be much more prevalent although it still occurs less than the affect-regulation function. Caldas et al.¹⁹ studied female prisoners in Recife, Brazil, of whom 17% engaged in NSSI. Primarily, the authors attribute this high prevalence to the hostile setting with a lack of communication, attention, daily pursuits, and a predominantly monotonous life. Secondly, they point to the obvious advantages associated with NSSI, such as being transported to a different location: from their cell to the hospital ward or to a medical facility, or to an isolation cell in order to be alone, to avoid someone or to meet up with someone who is already in isolation, to score merchandise, etc. NSSI can also be engaged in as a means of solidarity, collective protest or social acceptance of newcomers by way of imitation behavior. A comparable instrumental function appeared in the expert interviews. They described patients that engaged in NSSI to be admitted to the care system, to receive attention, and even one patient who injured herself to accuse her husband of the injuries.

CONCLUSION

Although there are some differences in the forms of NSSI and the function they fulfill, there are important similarities between NSSI as it occurs in Latin America and its occurrence in countries with a primarily Caucasian population. Scientific information on NSSI in Latin America, however, remains difficult to find. Therefore we suggest that all publications would provide English key words and would be included in international scientific databases in order to ensure a worldwide dissemination of the information. Alternatively, the formation of one global centralized Spanish and Portuguese database on mental health issues would be of great interest to researchers and health-care professionals worldwide.

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REFERENCES

1. Klonsky ED. The functions of self-injury in young adults who cut themselves: Clarifying the evidence for affect-regulation. *Psychiat Res* 2009;166:260-268.
2. Favazza AR. The coming of age of self-mutilation. *J Nerv Ment Dis* 1998;186(5):259-268.
3. Gratz KL. Risk factors for deliberate self-harm among female college students: The role and interaction of childhood maltreatment, emotional inexpressivity, and affect intensity/reactivity. *Am J Orthopsychiat* 2006;76(2):238-250.
4. Mangnall J, Yurkovich E. A literature review of deliberate self-harm. *Perspect Psychiatr C* 2008;44(3):175-184.
5. Hawton K, Harriss L. The changing gender ratio in occurrence of deliberate self-harm across the lifecycle. *Crises* 2008;29(1):4-10.
6. Skegg K. Self-harm. *Lancet* 2005;366:1471-1483.
7. Schemo DJ. Recife journal: The decorated veterans of Brazil's stark streets. New York: New York Times; May 21; 1996.
8. Berry JM. Validity and reliability Issues in elite interviewing. *PS* 2002;35(4):679-682.
9. Woliver LR. Ethical dilemmas in personal interviewing. *PS* 2002;35(4):677-678.
10. Maldonado MG. La automutilación. Instituto del dolor y psiquiatría transcultural. Cross-Cultural Clinic for Pain and Psychiatry. Retrieved from www.estedolo.com/dolor/automutilacion.htm 2008.
11. Matos F. AutoMutilação: Um problema sério e cada vez mais comum. *Ligaçãoteen, lifestyle, dezembro* 2011. Retrieved from: www.ligacaoteen.com.br/lifestyle/automutilacao-curando-a-dor-da-alma/344/
12. Arcoverde RL, Amazonas MCLDA. Aotolesão deliberada: relatos em comunidades virtuais. Apresentação Oral em GT 14 novembro 2011, Universidade Federal de Pernambuco, retrieved from www.encontro2011.abrapso.org.br/trabalho/view?ID_TRABALHO=2541.
13. Mejía R. Autolesión: el dolor como remedio. *Salud y medicinas. Centro de Salud Mental*. Retrieved from www.saludymedicinas.com.mx/centros-de-salud/salud-mental/articulos/autolesion-el-dolor-como-remedio.html 2012.
14. Montane-Lozoya J. Autolesión: definición, causas, tipos y motivos: El dolor del alma. *Adiconas, Suite 101, 26 febrero* 2010. Retrieved from <http://suite101.net/article/autolesion-definicion-causas-tipos-y-motivos-a11555#ixzz1CY5 az4Tb>.
15. Gonzalez-Forteza C, Quezadas DSA, Tapia JAJ. Problemática suicida en adolescentes y el contexto escolar: Vinculación autogestiva con los servicios de salud mental. *Salud Mental* 2008;31(1):23-27.
16. Unikel C, Gómez-Peresmitrè G, González-Forteza C. Suicidal behaviour, risky eating behaviours and psychosocial correlates in Mexican female students. *Eur Eat Disord Rev* 2006;14: 414-421.
17. Yaryura-Tobias JA, Mancebo MC, Neziroglu FA. Questões teórico-clínicas do comportamento de automutilação. *Rev Brasil Psiquiatr* 1999;21(3):178-183.
18. Villalobos-Galvis FH. Situación de la conducta suicida en estudiantes de colegios y universidades de San Juan de Pasto, Colombia. *Salud Mental* 2009;32(2):165-171.
19. Caldas MT, Arcoverde RL, dos Santos TF, Lima MS et al. Condutas autolesivas entre detentas da colônia Penalv Feminina Do Recife. *Psicologia em Estudo Maringá* 2009;14(3):575-582.
20. Mendoza Y, Pellicer F. Percepción del dolor en el síndrome de comportamiento autolesivo. *Salud Mental* 2002;25(4):10-16.
21. Nader A, Morales AM. Síndrome de automutilación en adolescentes: Análisis comparativo de comorbilidad. *Rev Chil Psiquiatr Neurol Infanc Adolesc* 2008;19(2):21-28.
22. Rodríguez G, Guerrero S. Frecuencia y fenomenología de lesiones autoinfligidas en mujeres colombianas con trastornos del comportamiento alimentario. *Rev Colomb Psiquiatr* 2005;34(3):343-354.
23. Yates TM. The developmental psychopathology of self-injurious behavior: Compensatory regulation in posttraumatic adaptation. *Clin Psychol Rev* 2004;24:35-74.
24. Van der Kolk BA, Perry JC, Herman JL. Childhood origins of self-destructive Behavior. *Am J Psychiat* 1991;148(12):1665-1671.
25. Hillbrand M. Aggression against self and aggression against others in violent psychiatric patients. *J Consult Clin Psych* 1995;63(4):668-671.
26. Muehlenkamp JJ. Self-injurious behavior as a separate clinical syndrome. *Am J Orthopsychiat* 2005;75:324-333.
27. Brown MZ, Comtois KA, Linehan MM. Reasons for suicide attempts and nonsuicidal self-injury in women with borderline personality disorder. *J Abnorm Psychol* 2002;111(1):198-202.
28. Klonsky ED, Muehlenkamp JJ. Self-injury: A research review for the practitioner. *J Clin Psychol* 2007;63:1045-1056.
29. Muehlenkamp JJ, Gutiérrez PM. An investigation of differences between self-injurious behavior and suicide attempts in a sample of adolescents. *Suicide Life-Threat* 2004;34(1):12-23.
30. Chapman AL, Gratz KL, Brown MZ. Solving the puzzle of deliberate self-harm: The experiential avoidance model. *Behav Res Ther* 2006;44:371-394.
31. Walsh B. Clinical assessment of self-injury: A practical guide. *J Clin Psychol* 2007;63:1057-1068.
32. Herpertz S, Sass H, Favazza A. Impulsivity in self-mutilative behavior: psychometric and biological findings. *J Psychiat Res* 1997;31(4):451-465.
33. Nock MK, Joiner TE Jr, Gordon KH, Lloyd-Richardson E et al. Nonsuicidal self-injury among adolescents: Diagnostic correlates and relation to suicide attempts. *Psychiat Res* 2006;144:65-72.
34. Polk E, Liss M. Psychological characteristics of self-injurious behavior. *Pers Individ Differ* 2007;43:567-577.
35. Hooley JM. Self-harming behavior: Introduction to the special series on non-suicidal self-injury and suicide. *Appl Prev Psychol* 2008;12:155-158.
36. Hodgson S. Cutting through the silence: A sociological construction of self-injury. *Sociol Inq* 2004;74(2):162-179.
37. Laye-Gindhu A, Schonert-Reichl KA. Nonsuicidal self-harm among community adolescents: Understanding the "ehats" and "whys" of self-harm. *J Youth Adolescence* 2005;34(5):447-457.
38. Fortune S, Seymour F, Lambie I. Suicide behaviour in a clinical sample of children and adolescents in New Zealand. *New Zeal J Psychol* 2005;34(3):164-170.
39. Velamoor VR, Cernovsky ZZ. Suicide with the motive "to die" or "not to die" and its socioamnestic correlates. *Soc Behav Personal* 1992;20(3):193-198.
40. Silverman MM, Berman AL, Sanddal ND, O'Carroll PW, Joiner TE Jr. Rebuilding the tower of babel: A Revised nomenclature for the study of suicide and suicidal Bbehaviors. Part 2: Suicide-related ideations, communications, and Behaviors. *Suicide Life-Threat* 2007;37(3):264-277.
41. Grajales AM. Automutilación: Un vicio como cualquier otro. *Blogspot Crónica Uniquindí, 17 de noviembre* 2010, retrieved from www.alejandramarcillo.blogspot.com.
42. González-Andrade F, Pez-Pulles R. White phosphorus poisoning by oral ingestion of firecrackers or little devils: Current experience in Ecuador. *Clin Toxicol* 2011;49:29-33.
43. Freitas DEP. Escoliação psicogénica: Aspectos psicológicos e fatores de personalidade. Universidade Estadual Paulista Júlio de Mesquita Filho (UNESP)- Brasil, retrieved from www2.fc.unesp.br/Biblioteca-Virtual/Detailha DocumentoAction.do?idDocumento=400 2011.
44. Tyler KA, Melander L, Almazan E. Self-injurious behavior among homeless young adults: A social stress analysis. *Soc Sci Med* 2010;70:269-276.
45. Tyler KA, Whitbeck LB, Hoyt DR, Johnson KD. Self-mutilation and homeless youth: The role of family abuse, street experiences, and mental disorders. *J Res Adolescence* 2003;13(4):457-474.
46. Nock MK, Prinstein MJ. A functional approach to the assessment of self-mutilative behavior. *J Consult Clin Psych* 2004;72(5):885-890.

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