

Incidence of Psychological Alterations in Adolescents with A Diagnosis of Self-Injury Treated at the Ambato General Hospital.

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Abstract

Introduction: Mental health is an integral part of wellbeing and knowing about what can affect it is of great importance, a greater number of adolescents with psychological problems.

Methods: This study analyzed the demographic and clinical characteristics, as well as the types and reasons for self-injury of 125 adolescents who attended the Ambato General Hospital.

Results: It was found that self-injury was more frequent in the female sex with 65.6%. Adolescents who self-injure present mostly depression (72.8%), followed by anxiety (22.4%) and stress (4.8%).

Conclusions: Self-injury in adolescents with psychological, it is associated with depressive and behavioral disorders.

Keywords: Depression, injuries, anxiety, emotional disorders.

Introduction

A right and a fundamental need is health, the World Health Organization defines it as: "State of complete physical, mental and social well-being, and not merely the absence of affections or needs" (1). Mental health is an essential part of well-being and is affected by multiple factors, which should be taken into account for promotion, prevention, treatment and recovery campaigns.

Throughout history, the health, disease process has allowed to build a number of solid scientific bases of why society gets sick not only physically but also psychologically, thus giving greater importance and value to mental pathologies and their condition in daily life regardless of age range, being the peak of prevalence in adolescents (2). The WHO mentions that worldwide there are different psychological alterations, such as the main ones are: depression, anxiety and stress.

Stress is a physiological reaction produced by our body to a complex situation that we do not know how to face at that precise moment, this can cause changes in our body, which can affect our future life, so it is advisable to have a healthy lifestyle to avoid any complications related to stress (3).

We must understand that it is not the same to talk about physical stress from psychological stress since the one exerts pressure on a body. After understanding this we determine that stress is formed of 3 components, the psychic, the social and the biological, it means that the subject having a shortage of resources to handle social and psychological demands is when this whole process appears and reaches the disease. Personality has been seen to be a variable that helps to lead or not this process, since we do not all perceive things in the same way (3).

An emotional solution to a moment of diffuse fear is when anxiety appears, it does not have precise features. Episodes of anxiety mostly appear out of nowhere causing a series of cognitive, unpleasant, tension and

apprehension changes which activate the autonomic nervous system, this causes inappropriate behaviors on the part of the individual who suffers from it (3).

Anxiety is the result of the conflict of the unacceptable impulse and the counterforce of the ego, this results in discomfort and annoying thinking, manifests itself in psychoanalytic theory (3).

This leads us to 3 theories, the first that represents the real stress that is the relationship between me and the environment, the second is neurotic and the most dangerous since its origin comes from impulses repressed by the person and the last one that are moral anxieties that one understands as the shame that is that of the superego (3).

With this we conclude that anxiety is a purely subjective state that is triggered mostly by emotional immaturity and the need for dependence developed by the inferiority and insecurity of the person (3).

Depression groups several feelings that are related to mood swing, currently it is of great prevalence. The World Health Organization (WHO) estimated that by 2020 it would be the second cause of disability within the population worldwide, given that patients with this affectation have a high rate of injuries, self-harm and even mortality (4).

It should be noted that there are two important signs present in the depressive state sadness and inhibition. The individual is affected by his environment under different faces: his exterior, the superegoic satisfactions, to which we could add the desire of the other (5).

These psychological alterations affect ten out of eight adolescents, directly influencing their lifestyle producing changes in behavior, for this reason we must promote well-being, protect them from fictitious expectations and possible external and internal risk factors that can affect the ability to develop their potential, thus achieving complete physical well-being, mental and social (2).

Psychological alterations in adolescents are an open sea of pathologies, therefore, in this article I will focus exclusively on the three mentioned above as the main triggers of self-harm, focusing on their main warning signs, thus giving them the relevance they deserve within the study population.

The word of self-harm, deliberate self-harm, self-harm, or self-mutilation are nothing more than synonyms that lead in a single direction, to produce pain, to avoid some emotional state or a certain moment in a specific space (6). They are the third cause of death among young people aged 10 to 18 years, so initiatives for the prevention of self-injurious behaviors in schools should focus on the identification of populations at risk, this would lead us to reduce the rate of adolescents with self-harm (7).

In Ecuador there is a model of comprehensive Community and Intercultural Family Health Care, where it is evident that depression, anxiety and stress are triggering pathologies towards self-harm, creating a difference in percentages between men and women, prevailing in greater numbers within the female population (8). This type of behavior is reflected to avoid other emotions, since pain directly blocks emotional receptors, focusing all attention on supporting the pain caused and avoiding the emotional part (9).

The provocation of these self-harms has a number of purposes, which are:

- 1- Attracting attention: defense mechanism used to attract attention and therefore show dependence on another person.
- 2- Due to low self-esteem: this state is associated with a feeling of guilt and not being accepted by society.
- 3- Avoid feeling emotional pain: Pain receptors are prioritized compared to feeling some kind of emotion.
- 4- Parasuicidal behavior: the vast majority of cases do not reach this extreme, but if adequate attention is not paid to it, a catastrophe can occur (10).

The risk factors that occur in this type of behavior are:

- The personal characteristics of the person encompassing impossibility, hopelessness, anger and hostility.
- Family characteristics, it is vital to develop in an optimal environment as this affects the formation of a good personality. It has been observed that there is a direct relationship between adolescents who grow up in hostile environments or in single-parent homes are more likely to reflect these characteristics of self-harm.
- Psychiatric disorders ranging from depressive disorders, substance abuse and conduct disorders (11).
- The media are a fundamental pillar to guide the stereotypes of society, therefore, fictitious images are created about the perception of beauty, this leaves no room for evolution to the younger population, generating stress, depression or even anxiety for not achieving these stereotypes (12).

There has been no appropriate response from the health system to address mental disorders, the great need for treatment and being taken into account is vital worldwide. 76% to 85% of people with severe mental disorders are untreated in low- and middle-income countries. In places with high incomes they also have a high percentage between 35% and 50% (13). But it is also striking the attention with poor quality that the individuals who are attended have.

Castro (2014) took into account a group of 10 adolescents ranging in age from 12-19 years, these patients self-harmed. It turned out that suicidal ideation occurred in all of them, however, only two came to a severe attempt to harm themselves (14).

Around the world, suicide is inconvenient for public health. In Ecuador according to the National Institute of Statistics and Census (INEC) during 2001 and 2014 adolescents and young people who committed suicide were 4 855 and in 2016 there were 1219, of these 16.48% were between 10 and 17 years old being 201 adolescents (15).

In the work of Bombón, V. (2017) evaluated how emotional factors cause self-harm in adolescents and how this influences disruptive behaviors, in a population of 545 students of an Educational Unit in the city of Ambato, the authors used the Self-Harm Questionnaire to study anxiety and depression. It was observed that in half of the sample there was self-harm. Half also had anxiety, 25% less anxiety and one eighth greater anxiety; In addition, three-quarters had minimal depression, 25% mild depression, 25% moderate depression, and a minimal major depression (16).

Ecuador is not close in terms of treating mental health or preventing related diseases, it is a lack of information that exists on these issues. There are few studies that speak of self-injurious behaviors and the available information is scarce regarding the causes. The Ministry of Public Health of Ecuador (MSP) (2013) mentions the lack of epidemiological research on self-injurious behaviors.

Therefore, we measured the incidence of psychological alterations in adolescents diagnosed with self-harm who were treated at the Ambato General Hospital.

Methodology

Method

The present study consisted of a review of the medical records of adolescents aged 12 to 17 years, attended for self-harm during 2021 at the General Hospital of Ambato.

The review consisted of identifying self-injured adolescents who already have the previous psychological alterations that we are going to analyze how it is: depression, anxiety and stress. Once the cases were located, the following data were collected: a) self-injurious behavior: type, reasons for doing it, time of evolution; b) demographic and clinical data: age, sex, and diagnosis; (c) family composition and functioning;

Design and Population

A retrospective cohort study or also called historical cohort study is carried out which is an observational, analytical and longitudinal study made from information that was previously obtained, the study is based on patients who previously presented the conditions that we are going to analyze in this article and through this document we intend to compare and understand the data.

The population was 125 Adolescents in 2021 who arrived at the General Hospital of Ambato with a previous diagnosis of anxiety, depression and / or stress that was subsequently classified according to the type of disorder, then subclassified into groups that presented self-harm after their diagnosis, in order to analyze, compare and understand their incidence, associated factors and the time each took to present self-harm and its diagnosis until the hospital.

Statistical analysis

A causal analysis is carried out to determine the degree of the relationship between cause and effect which in this case would be mental illnesses (anxiety, depression and stress), as these can trigger self-harm depending on the disease to later make a comparative analysis between them, in such a way to express the data more easily and determine which has a greater cause and effect relationship with self-harm.

Data were analyzed and collected in Excel 2013 using descriptive statistics.

Results

The sample was the clinical records of the 125 patients who presented self-harm in 2021 at the Ambato General Hospital. Their demographic characteristics were: mostly women with 65.6%.

With respect to age it is present in an average of 14.92 years. The minimum age was found to be 12 years and the maximum was 17 years.

Regarding occupation, most were students with 72.8%, followed by employees with 18.4% and no occupation with 8.8% respectively. Family structure is also an important factor and it was mostly observed that adolescents living alone with the mother are 51.2%, with both parents 43.2% and with a relative or household 5.6%. Patients who mentioned having presented sexual abuse were 12%. The psychological alterations that were taken into account for this study were depression: present in 91 patients being 72.8%, anxiety 28 patients is 22.4% and 6 patients who were diagnosed with stress equivalent 4.8%. (Table 1).

Table 1 Demographic and clinical characteristics

Characteristics	%	N=125
Sex:		
● Male	34,4	43
● Female	65,6	82
Average age	14.92 years	
Occupation:		
● Students	72,8	91
● Employees	18,4	23
● None	8,8	11

Family constitution		
• Mother only	43,2	54
• Both parents	52,2	64
• Other family members /Casa Hogar	5,6	7
Sexual abuse		
• Yes	12,0	15
• No	88,0	110
Diagnostics		
• Depression	72,8	91
• Anxiety	22,4	28
• Stress	4,8	6

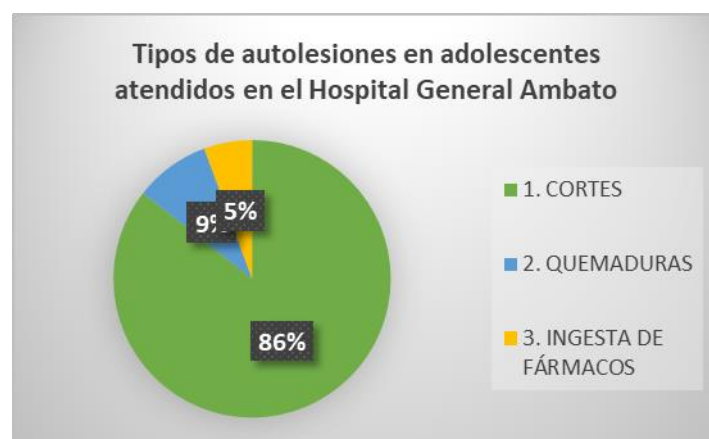


Illustration 1 Types of Self-Harm

Figure 1 shows the different types of self-harm, superficial cuts in wrists and forearms was the most frequent with 86% in 107 patients.



Illustration 2 Reasons for self-harm

As for the reasons for self-harm, 52.8% are related to low tolerance for frustration. 36% was to draw attention either for sentimental or family problems where they want to make the person with whom they have conflicts feel guilty. 11.2% are associated with affective symptoms and anxiety such as sadness or irritability. This is shown in Figure 2.

Discussion

The data found are related to previous studies (17), such as the one carried out by Ulloa in (2013) where it is observed that the female sex has 76%, being the majority as in this study women represent (65.6%), however this does not mean that it is exclusive of that sex since in men it was also presented with (34.4%) (18). Studies have been reported in communities where no gender differences have been found (19).

There are also similarities in the ages found in my study as in that of Martínez (2015) and Ulloa in (2013) with the average age being 14 years (20) (18).

Like the high frequency of alterations in the family nucleus and a history of sexual abuse are predominant factors for self-harm. In this study it was evidenced that living alone with the mother represents 51.2%, both parents 43.2% and other relatives 5.6% this is equivalent to several previous studies where adolescents living with a relative are 50%. (17) (21) However, in Ulloa's study, the highest prevalence falls on adolescents living with both parents with 47.3% (18). Regarding sexual abuse, it has been seen that there is a relationship between adolescents who presented this event and those who did not, in our study it was 12% (22) (23).

Within several studies carried out, it has been found that the most frequent forms of self-harm in adolescents are cuts, blows, burns, bites, scratches, pinching, hair pulling, drug intake (24), in the present study only cuts, burns and drug intake were analyzed. It was found that cuts are highly prevalent with 85.6%, which is the same as other studies on the subject such as (Zaragozano 2017) where skin cuts presented 85% (17).

As for the diagnosis with the highest percentage was depression with 72.8%, 22.4% anxiety and 4.8% with stress, this is similar to the study (Espinoza 2017) where he studied 21 students from an Educational Unit in the province of Los Ríos where depression was in 62% and anxiety with 48% (25). In Ulloa it was observed that 12.4% presented depressive symptoms and 7.7% anxiety symptoms (18). (Cornellà i Canals 2015) indicated that depression, behavioral disorders are risk factors and triggers for self-injurious behaviors (26). On the other hand (Escobar 2020) mentions that depression increases the risk of non-suicidal self-harm 8 times more (27).

Frustration 52.8%, attention 36% and affective symptoms 11.2% were the main reasons associated with self-harm in adolescents in this study, this is similar to what (Ulloa 2013) found being 42% cases associated with frustration and 30% related to affective symptoms (18).

To examine the results of this study, it is necessary to take into account the limitations of being based on review of medical records. Where the severity of symptoms cannot be observed through an interview.

Conclusion

Psychological conditions are important factors in triggering self-harm in adolescents, especially those diagnosed with depression. The sex distribution is mostly female being a significantly higher percentage compared to the male sex. It is important to consider family problems as they can increase the risk of self-harm within the adolescent population. In relation to the main type of self-harm, cuts predominate.

References

- [1] Herrero Jaén S. Formalization of the concept of health through logic: impact of formal language in health sciences. Jan. 2016;10(2):0–0.
- [2] Moral M, Carlos J, Galán S, Beitia S, Navarro-pardo E, Carlos J, et al. Child and adolescent development: most frequent mental disorders according to age and gender. *Psicothema*. 2012;24(3):377–83.
- [3] Sierra JC, Ortega V. Anxiety, anguish and stress: three concepts to differentiate. *Rev mal-estar e subjetividade*

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- [Internet]. 2003 [cited 2021 Apr 7];3(1):10–59. Available from: <https://www.redalyc.org/pdf/271/27130102.pdf>
- [4] World Health Organization. Depression [Internet]. 2020 [cited 2021 Apr 7]. Available from: <https://www.who.int/es/news-room/fact-sheets/detail/depression>
- [5] Bertholet, Robert. Depression, a reading from psychoanalysis. In: IV Congreso Internacional de Investigación y Práctica Profesional en Psicología XIX Jornadas de Investigación VIII Encuentro de Investigadores en Psicología del MERCOSUR Facultad de Psicología - Universidad de Buenos Aires, Buenos Aires [Internet]. 2012 [cited 2021 Apr 7]. Available from: <https://www.aacademica.org>.
- [6] Sánchez Sánchez T. Self-harm in adolescence. Meanings, perspectives and prospection for its therapeutic approach. *Rev Psicoter*. 2018;29(110):185–209.
- [7] Villa PAM, Gordillo NM, Figueroa GV, Flores REU. Adolescents with self-harm and suicidal ideation: A group with greater comorbidity and psychosocial adversity. *Public Health Mex*. 2016;58(3):335–6.
- [8] Domínguez E, Flores C, Pachterres S. Model of comprehensive family, community and intercultural health care. *Mastery of Science*. 2017;3(2):921–35.
- [9] Martín Sanz I. Early detection of non-suicidal self-harm in adolescents. Health education programme for parents. 2019;
- [10] Gomez CR. Prevalence of Mental and Behavioral Disorders in the First Level of Care of Zonal Coordination 9-Zalud. Vol. 1, *Journal of Materials Processing Technology*. 2018. 1–8 p.
- [11] Frías Ibáñez Á, Vázquez Costa M, Del Real Peña A, Sánchez del Castillo C, Giné Servén E. Self-injurious behavior in adolescents: prevalence, risk factors and treatment. *Cuad Med psychosomatic and Psychiatrist link*. 2012;33–48.
- [12] Juan Faura García. Self-harm: Guide to anti-contagion measures and against the disadvantages of the Internet. *ASeFo*. 2017;1–20.
- [13] García M. Intervention Program for the treatment of Non-Suicidal Self-Harm in the adolescent population. 2018;29.
- [14] Morales JC. Non-suicidal self-harm in Peruvian adolescents: A diagnostic and psychopathological approach. *Rev Neuropsiquiatr* [Internet]. 2014 [cited 2021 Apr 7];77(4). Available from: <http://www.scielo.org.pe/pdf/rnp/v77n4/a05v77n4.pdf>
- [15] Gerstner RMF, Soriano I, Sanhueza A, Caffé S, Kestel D. Epidemiology of suicide in adolescents and young people in Ecuador. *Rev Panam Public Health*. 2018;42.
- [16] Veronica Alexandra Bombón Tisalema. Emotional factors and their influence on self-injurious behaviors; the cutting in the students of the Educational Unit "Juan Benigno Vela" of the city of Ambato province of Tungurahua [Internet]. [Ambato]: Universidad Tecnológica Indoamérica; 2017 [cited 2021 Apr 7]. Available from: http://repositorio.uti.edu.ec/bitstream/123456789/567/1/BOMBON_TISALEMA_VERONICA_ALEXANDRA.PDF
- [17] Fleta Zaragoza J, Miral D. Self-harm in adolescence an emergent behavior. *Bol Pediatr Arag Rioj Sor*. 2017;47(2):37–45.
- [18] Rosa Elena Ulloa Flores, Cecilia Contreras Hernández, Karina Paniagua Navarrete, Gamaliel Victoria Figueroa1. Frequency of self-harm and associated clinical features in adolescents attending a children's psychiatric hospital. *Health Ment*. 2013 Sep [cited 2021 Apr 8];36(5). Available from: http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0185-33252013000500010
- [19] Castro K, Kirchner T, Planellas I. Predicting self-destructive behavior in adolescents through coping typologies* Predicting Self-Destructive Behavior in Adolescents by Means of Coping Typologies. *Univ Psychol*. 2014;13(1):121–33.
- [20] Martínez-Falero Gómez A. Parenting style and self-harm in adolescence [Internet]. [Madrid]: Universidad Pontificia de Comillas, Madrid, Spain; 2015 [cited 2021 Apr 9]. Available from: <https://repositorio.comillas.edu/xmlui/handle/11531/1058>
- [21] International Self-Harm Society. Causes – International Self-Harm Society [Internet]. [cited 2021 Apr 13]. Available from: <https://www.autolesion.com/guia-autolesion/para-el-psicologo/causas/>
- [22] Hawton K, Saunders KEA, O'Connor RC. Self-harm and suicide in adolescents. *Lancet* [Internet]. 2012 [cited 2021 Apr 13];379(9834):2373–82. Available from: <https://pubmed.ncbi.nlm.nih.gov/22726518/>

- [23] Villarroel JG, Jerez SC, Angélica Montenegro MM, Montes CA, Igor MM, Silva HI, et al. Non-suicidal self-injurious behaviors in clinical practice. First part: conceptualization and diagnosis Non suicidal self injuries in clinical practice. *Rev Chil Neuro-Psiquiat* [Internet]. 2013 [cited 2021 Apr 14];51(1). Available from: <https://scielo.conicyt.cl/pdf/rchnp/v51n1/art06.pdf>
- [24] Muehlenkamp JJ, Claes L, Havertape L, Plener PL. International prevalence of adolescent non-suicidal self-injury and deliberate self-harm. *Child Adolesc Psychiatry Ment Health*. 2012 Mar 30;6.
- [25] Karen Espinoza Yopez. Psychosocial characteristics in adolescents with self-injurious behaviors belonging to the "Velasco Ibarra" Educational Unit of the Buena Fe Canton. [Internet]. [Guayaquil]: University of Guayaquil; 2017 [cited 2021 Apr 13]. Available from: <http://repositorio.ug.edu.ec/bitstream/redug/26523/1/TESIS KAREN.pdf>
- [26] Josep Cornellà i Canals. Self-destructive behavior in the adolescent. Suicide, its prevention. [Girona]: Garbí from the University of Girona; 2015.
- [27] Marcia Alfonsina Escobar Carrión M. Prevalence of non-suicidal self-harm and suicidal behavior in adolescents from the outpatient clinic of child and adolescent psychiatry at the Vicente Corral Moscoso Hospital, and associated factors. May 2018-April 2019. [Cuenca]: University of Cuenca; 2020.

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