

IMPACT OF SELF- INFLECTED INJURIES ON EMERGENCY CARE IN CHILE: AN ANALYSIS OF THE PERIOD 2021-2022

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Abstract: **Introduction:** Self-inflicted injuries are a complex phenomenon, defined as the intention to cause physical harm, which may or may not be associated with suicidal intention. To date, there are no epidemiological studies in this regard in Chile, therefore, the main objective of this research is established: Establish the percentage of emergency department care for self-inflicted injuries in the period 2021-2022 in Chile. **Materials and methods:** The data used was obtained from the Department of Statistics and Health Information and the National Institute of Statistics. A descriptive analysis of the cases was carried out according to age group and trimester. No ethics committee was required to carry out this work. The authors declare no conflict of interest. **Results:** A total of 14,875 emergency services were studied corresponding to intentionally self-inflicted injuries in the country, representing 0.05% of their total attention. Within which, a higher percentage was registered for the age group between 15 to 64 years, with 78.23% of the cases, and the lowest percentage was registered for the age group under 1 year with 0.13%; Depending on the quarter, an increase in the percentage of attention was observed in the 3rd and 4th quarter of the year. **Discussion and Conclusions:** These results have revealed the magnitude of the problem, because validated information on this topic at the national level is scarce, with limitations in the quality of records and diagnosis coding. That is why it is crucial to promote more research in this area at the national level to improve understanding of this problem and develop appropriate interventions.

Keywords: public health, psychiatric emergency service, suicide.

INTRODUCTION

Self-harm injuries are a complex phenomenon, affecting individuals of different ages, gender and sociocultural backgrounds. These behaviors are defined as the intention to cause some physical harm, which may or may not be associated with suicidal intent. (1). This definition includes non-suicidal and suicidal behaviors. The former are defined as any act in which the tissue itself is destroyed, without any lethal intention, being attributed a mechanism to relieve or reduce negative feelings or as a form of self-punishment (1). On the other hand, the latter differ in that their intention is to end their own life. (2).

The different manifestations of self-harm injuries include cuts, burns, blows or bites, among others. These actions fulfill a specific function for those individuals who carry them out, whether it is providing momentary emotional relief or acting as a self-regulation strategy in the face of distress or ultimately seeking suicide. (3)

At the diagnostic level, self-injurious injuries are frequently associated with mental disorders such as personality disorders, mood disorders, and eating disorders. It is important to mention that the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) has established criteria to differentiate between self-injurious behaviors with suicidal intent and those without suicidal intent. These criteria have been developed for the diagnosis of suicidal behavior disorder and, although it is not relevant to detail them for this study, it is important to take them into account when making the diagnosis. (4)

The risk factors associated with self-harm injuries cover different areas, including the family environment (such as divorce and domestic violence), personal aspects (such as personality and sexual diversity) and external factors (such as sexual abuse and the use of drugs). social networks). (3)

Self-harming behaviors are the most important risk factor for suicide, regardless of age, sex, and the way in which these self-harms are carried out. It is important to highlight that the most serious and worrying complication associated with self-harm is the risk of suicide. (2)

Suicide is a growing public health problem and accounts for nearly 800,000 deaths annually. On the other hand, self-harm injuries are more frequent in adolescents and young adults, predominating in the female gender. (2)

Although the reasons why patients go to the emergency department are not detailed in most bibliographic sources, the need to go to the emergency room arises to receive timely medical intervention according to life risk, and/or care support to stabilize the condition. psychiatric manner to patients.

Due to the lack of clinical studies in Chile, the importance of this study is to establish the percentage of emergency department care for self-inflicted injuries in the 2021-2022 period according to age group, and according to epidemiological weeks classified into quarters.

GOALS

MAIN GOAL

- Establish the percentage of emergency department care for self-inflicted injuries in the period 2021-2022 in Chile.

SECONDARY OBJECTIVES

- To examine the percentage of emergency department visits for self-inflicted injuries by age group.
- Identify the percentages of emergency service visits for self-inflicted injuries according to associated epidemiological weeks in quarters.

MATERIALS AND METHODS

The present study is observational, cross-sectional and descriptive. Its objective is to determine the percentage of care in emergency services due to self-inflicted injuries in Chile during the period between 2021 and 2022. In addition, a breakdown of this data will be carried out according to the incidence by epidemiological week (SE), grouped by quarter to facilitate data processing, representing a quarter to 4 months. The information will also be analyzed according to different age groups. The data used in this study were obtained from the Department of Statistics and Health Information (DEIS) and the National Institute of Statistics (INE). A total of 32,951,596 emergency visits were included, of which 14,875 visits for self-inflicted injuries were specifically analyzed, of which they were subdivided each year, to improve records into 4 quarters (January to March (1), April to June (2), July to September (3) and October to December (4). All data collected will be managed using the Microsoft Office Excel program, specifically spreadsheets.

The present study does not require an ethics committee, due to the data being publicly accessible.

RESULTS

A total of 32,951,596 emergency service attentions were studied, of which 14,875 attentions corresponding to intentionally self-inflicted injuries in the country, which represent 0.05% of the total emergency care between the periods studied from 2021 to 2022, within which the highest percentage of these care was recorded in 2021 with 52.40% (N=7,794) and the lowest percentage of Treatment for self-inflicted injuries was recorded in 2022 with 47.60% (N=7,081).

Regarding the percentage of emergency care for self-inflicted injuries according to age group, a higher percentage of such care was

recorded for the age group between 15 to 64 years old, represented at 80.23% (N= 5681) for the year 2022, and the lowest Percentage of care for self-inflicted injuries was recorded for the age group under 1 year old, with a percentage of 0.26% (N= 20) in 2021. (Figure 1).

A significant variation is observed in emergency care by quarter (division of the 52 epidemiological weeks of the year into 4 groups of 13 weeks each) in the population between the years 2021 and 2022. The periods with the highest percentages of care were fourth quarter and the third quarter, representing 30.19% (n=2,353) and 37.70% (n=3,133) respectively. On the other hand, the lowest percentages were recorded in the first quarter, with 17.98% (n=1,401) in 2021 and 18.49% (n=1,537) in 2022.

DISCUSSION

Based on the results found, with respect to the percentage of emergency care for self-inflicted injuries per year, we can conclude that in 2021 there were more care than in 2022. We must remember that in the period 2020-2021 we are experiencing a pandemic period worldwide due to COVID-19. This generated disruption and losses worldwide, generating consequences on people's mental health, increasing the prevalence of psychiatric pathologies. This factor could have influenced the results and the comparative prevalence between both years.

Regarding the percentage of emergency care for self-injury according to age group, viewing the international studies, we were able to find similarity with them in terms of the highest percentage of care for self-inflicted injuries between 15 and 64 years of age, highlighting prevalence in adolescents and being able to infer correlation with emotional dysregulation, given greater intolerance of frustration, greater difficulty in self-regulation of impulses, presence of hasty decisions in the

face of strong emotions, impulsivity, among others(4). In contrast to the above, it could be thought that there was a bad record due to a typing error, because no data has been found that validates the existence of self-injury in the age group under 4 years old, as was recorded in this study for the year 2021, however, it could be inferred that it would be related to aggression in hyperactive or dysregulated autism spectrum patients.

When observing the results obtained from the years studied in terms of the percentage of emergency care for self-harm by quarter, we highlight that the increase in the registration of care occurs both in 2021 and in 2022 in the 3rd and 4th quarters. It can be related to the time of less sunlight and less time outdoors due to low temperatures (5). It is also associated with lower vitamin D values in the population and in turn related to a greater decrease in these values in the winter season. (5).

The fundamental strength of the present study lies in its solid database, which offers national representation. However, it is relevant to mention some limitations identified in the analysis; Firstly, it was found that in 2019 there were no records available, which could affect the complete understanding of the trend over time as it also did for the registration by gender, secondly, a possible source of error in the coding of diagnoses for children under 1 year of age, which could have been classified as self-injury typical of a hyperactive patient as mentioned above. These factors may have influenced the precision of the results obtained. On the other hand, it must be noted that research on this topic at the national level is scarce, which highlights the need to promote more exhaustive and detailed studies to adequately understand this problem and develop effective interventions.

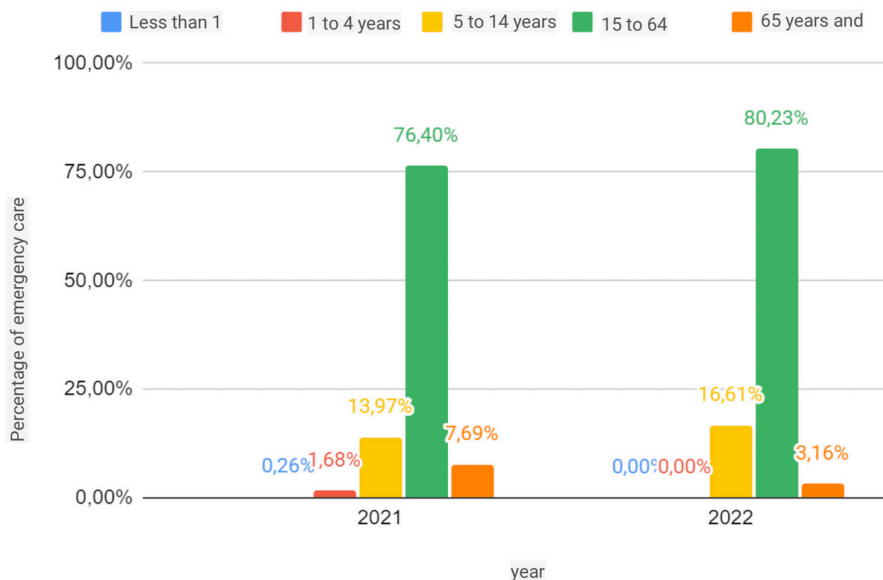


Figure 1: Percentage of emergency care for self-inflicted injuries by age group in the period 2021 to 2022 in Chile.

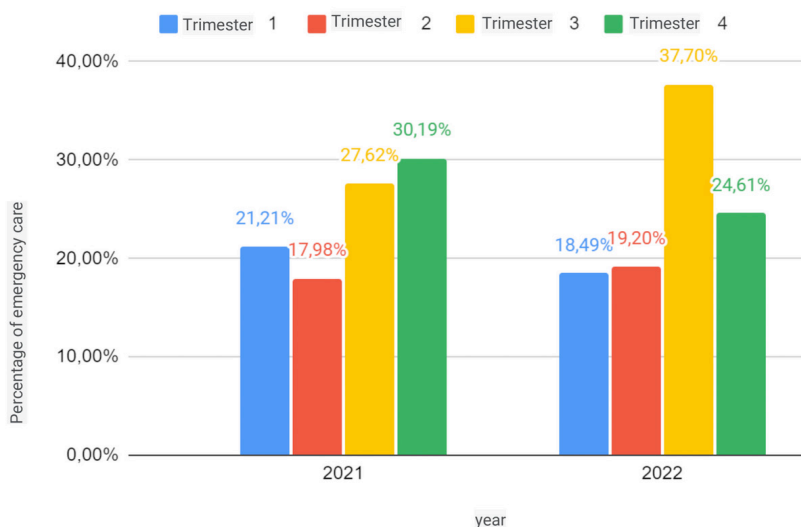


Figure 2: Percentage of emergency care for self-inflicted injuries per associated epidemiological week according to quarter in the period 2021 to 2022 in Chile.

CONCLUSION

In short, this research into self-harm has revealed the magnitude of the problem. Although important risk and protective factors have been identified, there are limitations in the quality of records and coding of diagnoses. That is why it is crucial to promote more research in this area at the national level to improve understanding of this problem and develop appropriate interventions.

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