

## FORENSIC PERSPECTIVE OF THE COVID PANDEMIC IMPACT ON THE NUMBER OF VICTIMS OF VIOLENCE

Costel Siserman<sup>1</sup>, Cristian Delcea<sup>1,\*</sup>, Manuela Gyorgy<sup>2</sup>, Cătălina Crișan<sup>1</sup>

<sup>1</sup>“Iuliu Hațieganu” University of Medicine and Pharmacy, <sup>2</sup>Babeș-Bolyai University, Cluj-Napoca, Romania

**Abstract:** *Objectives.* The present research is a longitudinal study with the aim of highlighting the effect of the pandemic on the frequency of aggressions from a forensic perspective.

The hypothesis started from the premise that the aggressions showed an increasing trend during the pandemic, indicating a significant difference between the number of aggressions in the previous period and the number of aggressions in the pandemic and post-pandemic period.

*Population.* The sample of the study consisted of 420 people who were identified by forensic findings at the Institute of Forensic Medicine of Cluj Napoca, as victims of aggression between 2019 -2022. The results showed significant differences in the number of aggressions during the pandemic period resulting in an upward trend.

*Conclusions.* The pandemic period had a significant impact on aggressive behaviors, with a tendency of an increased number of aggressions.

**Keywords:** Covid-19, aggression, victims.

### INTRODUCTION

This paper addresses the issue of the COVID-19 pandemic, conceptualized as the coronavirus pandemic. The phenomenon has been reported globally and is caused by the severe acute respiratory syndrome of SARS-CoV-2. This new strain of coronavirus, discovered in Wuhan, China in December 2019, was confirmed to be present in Romania on February 26, 2020 [1].

The impact of the pandemic has been felt on multiple levels, causing social and economic disruption worldwide. The implementation of public health measures, including the restrictions imposed during this period, has led to a significant erosion of social welfare. The impact of the pandemic was felt by doctors, medical staff from specialized hospitals and auxiliary staff [2] as well as some forensic doctors from the network of forensic institutes [3]. At the same time, the risk of domestic violence [4], abuse and murder [5] has increased due to the isolation and mental vulnerability [5] as well as other associated social factors [6].

From a forensic perspective, violence is classified in two types: reactive, emotional and premeditated violence. The first category [7] of violence, more common within families, spatial proximity and interpersonal relationships is mediated by increased neuroticism and other associated factors. Premeditated violence is a form of manifestation mediated by material, financial, political, religious purposes, psychopathological personality traits and antisocial personality disorders [8]. Most cases faced by forensic doctors are in the category of victims of reactive or emotional violence [9] as well as in the category of personality disorders.

The present paper follows a complex approach, from multiple perspectives, aiming to highlight the increased number of victims of reactive violence as well as of premeditated violence, analyzing their impact on the personality of victims [10].

Studies that have dived into the phenomenon of violence in the context of the pandemic indicate a visible increase of the number of victims of reactive violence as well as premeditated violence during the pandemic. However, we have to take into account that

\*Correspondence to: Cristian Delcea MD, “Iuliu Hatieganu” University of Medicine and Pharmacy, Cluj-Napoca, Romania, E-mail: cristian.delcea.cj@gmail.com

the data remain incomplete and uncertain regarding the actual number of victims in a population. Although we have clear data on the increase in Covid-19 infections [11] and other research on behavioral blockade and rational decisions during this period [12], the issue of violence remains a major concern of the competent institutions. The International Scientific Council, the World Health Organization and the UN Office for Disaster Risk Reduction are involved in supporting the efforts of analyzing the impact of COVID-19 on the global community in critical areas such as health, social, national governance, economy, global governance, environment and science and technology [13].

The main objective of the research was to investigate the increasing number of victims and the sex of the injured persons during the pandemic period.

### METHODS AND PROCEDURES

An objective centralization of the diagnoses established following the forensic evaluation within the Institute of Forensic Medicine of Cluj-Napoca during 2019-2022 was achieved. The following categories of trauma were found out (Fig. 1): cranio-cerebral trauma (13%), craniofacial trauma (9.5%), facial trauma (6.4%), thoracic trauma and / or limb injuries (14.3%), traumatic injuries caused by hitting with a hard object (56.8%).

There was a high share of victims with

traumatic injuries caused by hitting with a hard object and the lowest share being recorded in victims with facial injuries.

### RESULTS

A descriptive statistical analysis of forensic diagnoses was performed per gender distribution (Fig. 2). Therefore, out of those with cranio-cerebral trauma, 82% are women and 18% are men, out of those with craniofacial trauma, 97.3% are women and 2.7% are men, out of those with facial trauma, 46% are women and 54% are men, out of those with traumatic injuries caused by hitting with a hard object, 72% are women and 28% are men and out of the victims with thoracic and limb trauma, 83.2% are women and 16.8% are men. A comparison was also made between women considering different types of trauma. We obtained a chi-square coefficient of 2,854 at a significance threshold of  $p \leq 0.05$ . The differences in official reporting are statistically significant between women and men.

Statistics indicate a higher number of female victims who were registered at the Institute of Forensic Medicine during 2019-2022. This phenomenon has also been analyzed by the World Health Organization. It was pointed out that during the pandemic, mental health was severely affected by reduced social interaction and the elimination of support mechanisms. All these factors have led to economic insecurity and social

Diagnosis

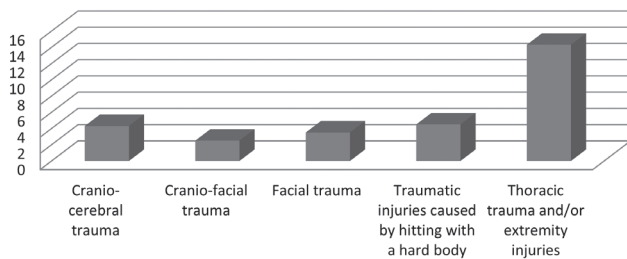


Figure 1. Forensic diagnosis types.

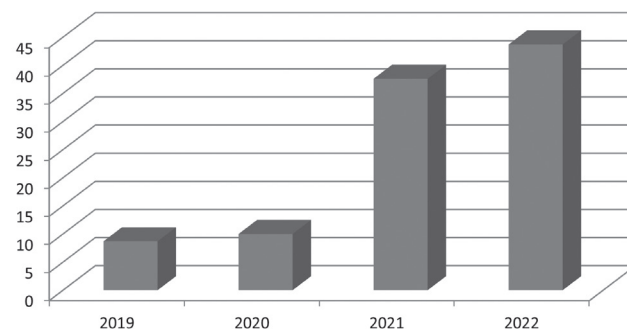


Figure 3. Dynamics of aggression during 2019-2022.

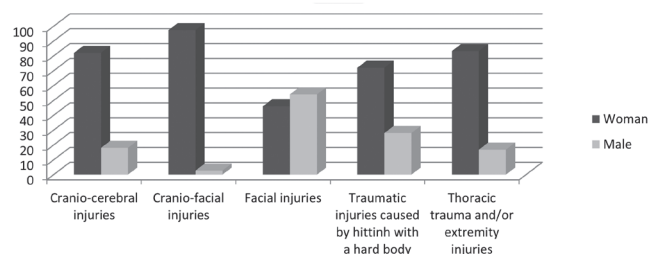


Figure 2. Forensic diagnosis types by gender.

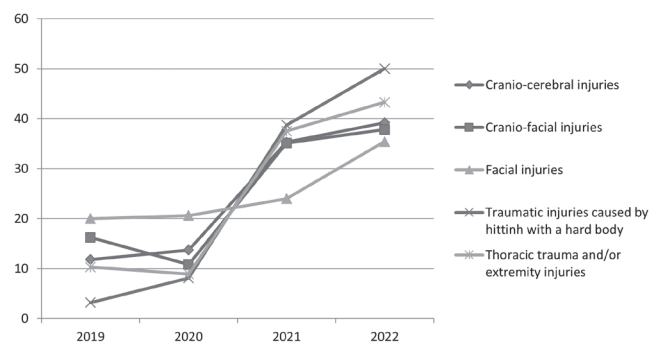


Figure 4. Diagnosis types during 2019-2022.

isolation leading to aggression and violence among the population [14].

Starting from the objective, an analysis was made regarding the frequency of aggressions during these 4 years (Fig. 3) The analysis covered the period 2019-2022, taking into account the official number of cases of violence registered within the Institute of Forensic Medicine of Cluj-Napoca. Therefore, it was found that, out of the total number of aggressions registered in the target period, 8.7% were in 2019, 10% in 2020, 37.6% were registered in 2021 and 43.7% in 2022.

Following the inferential analysis, we obtained a chi-square factor of 4.169 at a significance threshold of  $p \leq 0.01$ . There can be a significant increase in the pandemic and post-pandemic period as the years 2021 and 2022 were marked by a significant increase in the number of victims of aggression.

The analysis was also performed from the perspective of the type of recorded aggression (Fig. 4). It turned out that, out of the total number of cranio-cerebral traumas recorded in the period 2019-2022, 11.8% were recorded in 2019, 13.7% in 2020, 35.3% were recorded in 2021 and 39.2% in 2022. Out of the total number of injuries - craniofacial lesions recorded in the targeted period, 16.2% were recorded in 2019, 10.8% in 2020, 35.1% in 2021 and 37.8% in 2022. Out of the total facial injuries recorded in the period 2019-2022, 20% were in 2019, 20.6% were in 2020, 24% were in 2021 and 35.4% were in 2022. Out of the total traumatic injuries caused by hitting with a hard object in the target period, 3.2% were recorded in 2019, 8.1% in 2020, 38.7% in 2021 and 50% in 2022. Out of the total thoracic and / or limb injuries recorded in the 4 years, 10.3% were in 2019, 8.9% in 2020, 37.5% in 2021 and 43.3% in 2022. In the statistical analysis we obtained a chi-square coefficient of 1,714 at a significance threshold  $p \leq 0.01$ , indicating significant differences from one year to another.

## DISCUSSION

Between 2019 and 2022 there was a significant increase in the number of cases of violence officially registered at the Institute of Forensic Medicine of Cluj-Napoca. This phenomenon can be considered a consequence of the pandemic by imposing restrictive measures on the most important levels of life. Thus, violence can be considered a potential reaction to these changes caused by the pandemic context [15].

Both social isolation and forced quarantine

associated with specific virus-related fears can activate environments conducive to coercive and controlling behaviors, degenerating into violence. In the context of the pandemic, women were a vulnerable category, given the complexity of the process of giving up toxic relationships as well as the temporary cessation of support services and limiting access to justice during the pandemic.

Another relevant aspect was the identification of the predominance of female victims. Statistical analyzes have highlighted on one hand that the majority of victims of aggression highlighted in the period 2019-2022 are women, an issue that must be addressed in terms of relative objectivity, which can be explained by the fact that during this period women reported assaults rather than men. Our results can be compared with the large number of female victims who were pregnant in Cape Town, South Africa [16], married women in Egypt [17], women in urban and rural areas in Turkey [15] and Muslim women in Jordan [18].

The hypothesis that these results do not reflect the actual number of cases of aggressions that occurred should also be taken into account. A significant number is not being reported to the authorities. The pandemic context with its implications further favored the increase of the number of victims of violence, but at the same time the restrictive situation encouraged the dark number of aggressions [19].

Also, it can be noticed the increasing tendency of the number of aggressions registered at the Institute of Forensic Medicine of Cluj-Napoca during these 4 years. Thus, there is a slight increase in 2020 compared to 2019 in the case of aggressions resulting in craniofacial injuries, facial injuries, traumatic injuries caused by hitting with a hard object. On the other hand, the analysis indicates very small differences or even slight decreases in 2020. These changes can be explained by the fact that in 2020 the state of emergency was established in Romania, with a long period of restrictions imposed on citizens, which reduced significantly social interaction.

One hypothesis could be that many of these assaults were domestic assaults / domestic violence. This apparent decrease could also be caused by the cessation of legal services and social assistance. The blockade at the level of all institutions during the state of emergency could be considered as a factor of influence in terms of discouraging the reporting of aggressions. At the same time, economic instability, the panic induced by the spread of the virus as well as drastic restrictive measures discouraged the reporting of aggressions.

Analyzing the differences in the number of

aggressions that occurred in the officially reported figure, with the lifting of the state of emergency and the establishment of the state of alert, we can see significant increases in aggressions recorded, following an upward trajectory until 2022. This phenomenon could be determined by the relaxation of restrictive measures and resumption of activity of institutions. The significant increase in the number of reported cases of violence is influenced by the pandemic and post-pandemic period and by economic instability, pressure and insecurity of the population regarding the future. Consequently all these factors generate reactions of frustration and implicit repression manifested by aggressive behaviors [20].

**In conclusion**, the pandemic context generated a series of behavioral changes in the population. From a forensic perspective, this period of time led to a significant increase in the number of victims of violence recorded by the authorities with women being the most vulnerable category. The effects of the pandemic need to be analyzed in detail so that potential strategies can be identified for restoring balance and optimization on all affected levels.

#### **Conflict of interest**

The authors declare that they have no conflict of interest.

#### **References**

1. Ridley M, Chan A. *Viral: The Search for the Origin of COVID-19*. 2021. Harper.
2. Rus M, Enache A, Călin F. M, Sandu L. M, Delcea C. Burnout Effect Impact Over Medical Staff During Actual Covid-19 Pandemic Context. *Rom J Leg Med*. 2021; 29(3): 227-223.
3. Delcea C, Siserman C. The Emotional Impact of Covid-19 On Forensic Staff. *Rom J Leg Med*. 2021; 29: 142-146.
4. Gelder NV, Peterman A, Potts A, O'Donnelle M, Thompson K, Shah N, Oertelt-Prigione S, on behalf of the Gender and COVID-19 working group. COVID-19: Reducing the risk of infection might increase the risk of intimate partner violence. *Eclinical Medicine*. 2020; 21: 100348.
5. Radu CC, Chirilă VI, Săucea AM, Delcea C, Dumbravă DP. Marks Of the Covid-19 Pandemic on Forensic Medicine: A Systematic Review. *Rom J Leg Med*. 2020; 28 (4): 388-391.
6. Campbel AM. An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives. *Forensic Science International: Reports*. 2020; 100089: 1-3.
7. Coker AL, Smith PH, Thompson MP, McKeown RE, Bethea L, Davis KE. Social support protects against the negative effects of partner violence on mental health. *J Womens Health Gend Based Med*. 2002;11(5):465-476.
8. Clive R. Hollin. 2016. *The Psychology of Interpersonal Violence*. John Wiley & Sons, Ltd.
9. Gherman C, Enache A, Delcea C. The multi-factorial determinism of forensic expertise regarding sentence interruption on medical grounds and decision. *J Forensic Leg Med*. 2019;61:45-55.
10. Delcea C, Enache A. Personality Traits as Predictor of Crime. *Rom J Leg Med*. 2021; 29(2): 227-231.
11. Aabed K, Lashin MMA. An analytical study of the factors that influence COVID-19 spread. *Saudi J Biol Sci*. 2021;28(2):1177-1195.
12. Aaditya Bh, Rahul TM. Psychological impacts of COVID-19 pandemic on the mode choice behaviour: A hybrid choice modelling approach, *Transport Policy*, Elsevier. 2021; 108(C):47-58.
13. <https://council.science.ro/>
14. <https://cgdev.org/sites/default/files/pandemics-and-vawg-april2.pdf>.
15. Abrahams Z, Boisits S, Schneider M, Prince M, Lund C. The relationship between common mental disorders (CMDs), food insecurity and domestic violence in pregnant women during the COVID-19 lockdown in Cape Town, South Africa. *Soc Psychiatry Psychiatr Epidemiol*. 2022;57(1):37-46.
16. Abu-Elenin MM, Elshora AA, Sadaka MS, Abdeldaim DE. Domestic violence against married women during the COVID-19 pandemic in Egypt. *BMC Womens Health*. 2022;22(1):94.
17. Adibelli D, Sümen A, Teskereci G. Domestic violence against women during the Covid-19 pandemic: Turkey sample. *Health Care Women Int*. 2021;42(3):335-350.
18. Abujilban S, Mrayan L, Hamaideh S, Obeisat S, Damra J. Intimate Partner Violence Against Pregnant Jordanian Women at the Time of COVID-19 Pandemic's Quarantine. *J Interpers Violence*. 2022;37(5-6):NP2442-NP2464.
19. Endurance U, Aboluwaji D Ayinmoro. Trapped Between Two Pandemics: Domestic Violence Cases Under COVID-19 PandemicLockdown: A Scoping Review. *International Quarterly of Community Health Education*. 2021.
20. Sommer D, Velasco JR. Bored: A Pandemic of Domestic Violence. *Abarca, Marco, MSt (Oxon) Partner Abuse*. 2020; 12(1).