

# RADIOLOGICAL ASSESSMENT OF DOMESTIC VIOLENCE DURING COVID-19 LOCKDOWN, IN-DEPTH STUDY ON PAKISTANI POPULATION

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## ABSTRACT

In the little time after the emergence of the novel coronavirus disease (COVID-19) in China, the deceptive gossips and conspiracy concepts about the pandemic, surveillance, death rates and regarding threats are closely associated with social media and mass media. Since the outbreak started in the fall 2019, till now approximately 114, 291 people have died across the globe. The choices on quarantine applying must be based on the authentic accessible resources. Most of the studies reported adversative psychological impression slike frustrations, stress, anger, confusions and fear of infections as continuing paraphernalia throughout largest quarantine. The prominent meticulousness of such disaster is the coincidence of virology which is increasing rapidly as compared to itself virus is the domestic and family violence. The likelihoods of children and women being exposed to violence is intensely amplified, as family participants spend long time in close contact as well as home stress exaggerates which grows the risks even greater than to deal with potential financial losses. This study has been conducted in the Pakistan where cases of domestic violence have been increased during pandemic lockdown to assess the qualitative consequences in this duration. In current study, a higher percentage of immense kind of domestic abusive violence reported with ratio of 50-55 per day cases with 60% females 30% children were reported in radiology department with fracture bones in multiple anatomical positions. Multiple recommendations have been provided to overcome such devastating situations.

**Keywords:** COVID-19, Domestic violence, Child maltreatment, Partner abuse, Stay-at-home, Radiology

## Introduction

Coronavirus is single strand RNA enveloped, non-segmented and positive-sensed viruses that belongs to the Coronaviridae family of viruses. There are around six well-known forms of coronavirus which are capable to cause diseases in human beings significantly mild respiratory tract infections.<sup>1</sup> The most prominent and recognized types of coronaviruses reported in the few past decades are Middle East respiratory syndrome (MERS) and severe acute respiratory syndrome (SARS) epidemics which cause high proportion of mortalities.<sup>2</sup> The novel coronavirus also known as COVID-19 was originated in December

2019 in the lower respiratory tract infectious samples of multiple people in Wuhan, China which was found to be transmitted from the Wuhan seafood market, China.<sup>3</sup>

The symptoms exhibited in COVID-19 patients comprise respiratory distress, fatigue, fever and severe pneumonia with dry cough. According to the World Health Organization, the current cases of infections have been reported 13,070,095 confirmed cases of COVID-19, including 572,539 death sacross the world (15<sup>th</sup> July WHO COVID-19 dashboard). The global health emergency has been announced by the WHO

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after this outbreak. The developmental research on the discovery of anti-viral vaccines and immediate treatment medication for COVID-19 is under progress but quite a lot of months away.<sup>4</sup>

Since the National Health Commission officially recognized COVID-19 as a Class-B infectious illness, it has impacted the psychological conditions of people across the globe. During the COVID-19 outbreak in China, a study conducted during January, 2020 on sentiment analysis has acquired the psychological data and found significant variations.<sup>5</sup> The findings exposed that the apprehensions of people in terms of linguistic expressions have been rapidly increased and an upsurge in family and health reservations. The vagueness of the imminent situation causes cognitive insecurity and dissonance which produces a sensation of mental distress that lead towards the reduction in oriented activities and dissention and security trusts on family and health relationships.<sup>6</sup>

Moreover, people behave in a more conservative and reticent ways on feeling COVID-19 threats. COVID-19 has become the definitive disruptor due to characteristic property of reforming the work lives, family dynamics and finances of people. Confronting the media exposure problems causes psychological and emotional stress and distressing individual's relationships.<sup>7</sup> It is important to ensure the true prevalence of COVID-19. Majority of the people only experience COVID-19 through the social and mass media ever. As 24/7 coverage of multiple media resources make it look like the pandemic is ubiquitous for the lives. The research also demonstrates that the perceptions of the proportion of negative thoughts of viral infection are influencing heavily by due to reading and watching social media news.<sup>8</sup>

The United Nation (UN) reports highlight multiple emerging evidences of the impacts of the global COVID-19 pandemic in the form of domestic violence against girls and women. Globally, 243 million women and girls have been subjected to sexual and physical violence perpetrated by an intimate partner in last 12 months.<sup>9</sup> In France and Argentina, domestic violence has increased by 30% and 25% respectively since lockdown March 2020.<sup>10</sup> In Cyprus and Singapore, helplines have registered 30% and 33% domestic violence cases respectively on calls. These ratios have been enhanced also in Canada, United Kingdom, Spain and USA.<sup>11</sup> In Pakistan, the domestic violence

along with spousal abuse is rising steeply due to COVID-19 lockdowns, job loss, economy collapse and husbands working from home.

It makes endorsements to be deliberated by all zones of the society including international organizations, governments, and civil society so as to prevent and reduce the domestic violence against women at the onset, during, and after this public health crisis.<sup>12</sup> This study has been conducted in the Pakistan where cases of domestic violence have been increased during pandemic lockdown to assess the qualitative consequences in this duration. It is a live study that is drawing the experience and knowledge of an inclusive range of specialists who upkeep the solutions to end the violence against women, concentrating to the country framework in which the crisis are stirring.

## Materials and Methods

### Patients:

This was an institutional review board approved retrospective study and there was no industry support for it as well as the authors had control of the data and information submitted for publication. It involved the patients of Swat, Dir, Buner and Shangla District, Khyber Pakhtunkhwa, Pakistan. Study includes females and children (Age range within 10 to 50 years) who reported being victims of domestic violence and fractured bones from the radiology departments of Saidu Teaching Hospital, Saidu Sharif, Swat, Khyber Pakhtunkhwa, Pakistan from March 2020 to July 2020. Written informed consent was waived.

### Imaging data collection:

The automated medical record was studied for demographic data, comprising age, race, sex, and zip code of resident. Additional socioeconomic dynamics, for example accommodation status, sexual orientation, and incapacity were also explored. Particulars of domestic violence, comprising exhibited symptoms, pregnancy status, kinds of violence, and history of violence and strangulation were recorded. All radiological studies were performed accompanied by the medical records by means of the institutional registry of patient's data, and their reports were reviewed

manually by an expert of radiological imaging for potential violence regarding outcomes. The images were categorized in terms of musculoskeletal images, chest radiographs, (containing CT images and radiographs of face, axial, head, neck spine, and appendicular skeleton).

## Results

The average reported cases were 25 children and 10 female per day. The simple statistics is that before COVID-19 lockdown we used to receive 20 cases of domestic violence per day and during such crisis time they reached 50-55 daily (mean 52.5) with 60% females 30% children and rest of them are males with a mean age of 33 years (age range, 10-50 years). About 500 radiologic studies were performed overall on domestic violence victims within the 5 months (March 2020 to July 2020). Victim's imaging and musculoskeletal imaging comprised abnormalities in soft-tissue such as laceration, infection, swelling and hematoma were the most common imaging findings in this cohort study. Musculoskeletal injuries, such as acute fractures, chronic or sub-acute fractures, and ligamentous injuries, were associated with an adjusted 2-fold increased with potential violence-related obstetric-gynecologic imaging findings. Additional injuries, such as orbital hematoma, hemo-peritoneum, pneumothorax, pneumoperitoneum, and intracranial hemorrhage were rare. The bone fractures include Humerus, ulna, fracture, fingers, ribs, medial wall of the left orbit and skull. The CT scan and X-ray imaging findings have been presented in (Fig.1 to 7).



Figure 1: Humerus fracture X-ray of domestic violence victims



Figure 2: Ulna fracture X-ray of domestic violence victims



Figure 3: Fingers fractures X-ray of domestic violence victims

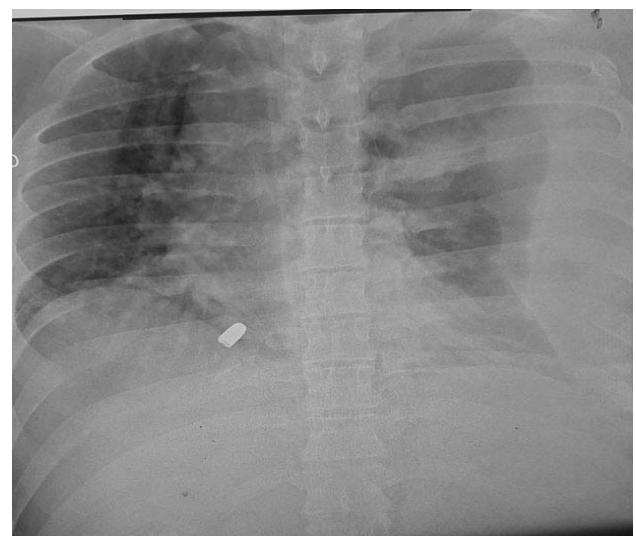


Figure 4: Chest ribs fracture X-ray of domestic violence victims

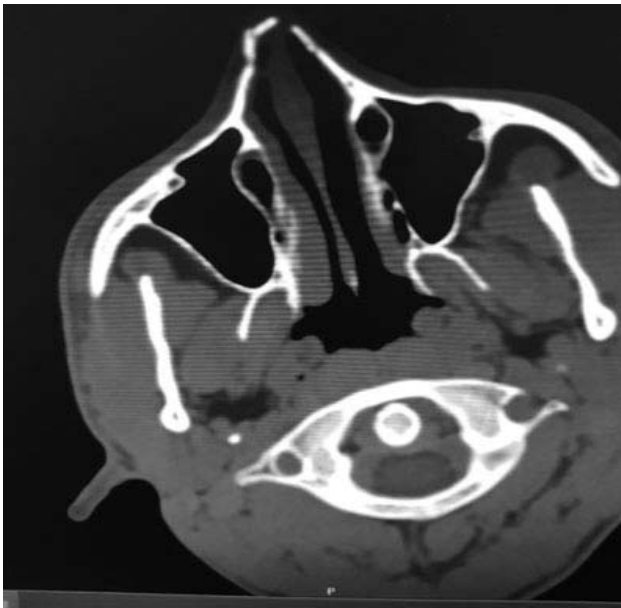


Figure 4: Deformity of the medial wall of the left orbit

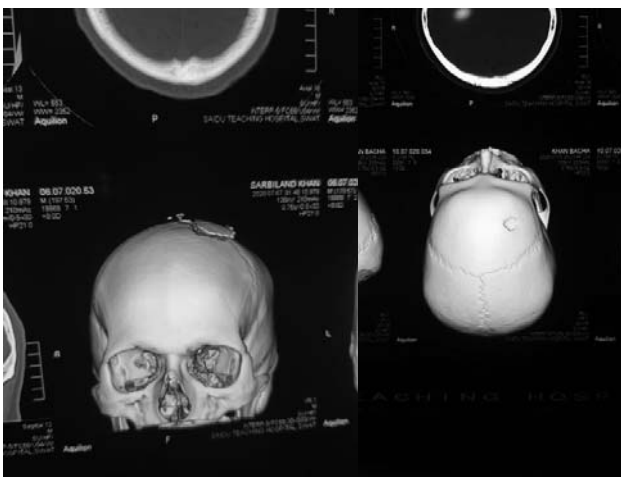


Figure 6:

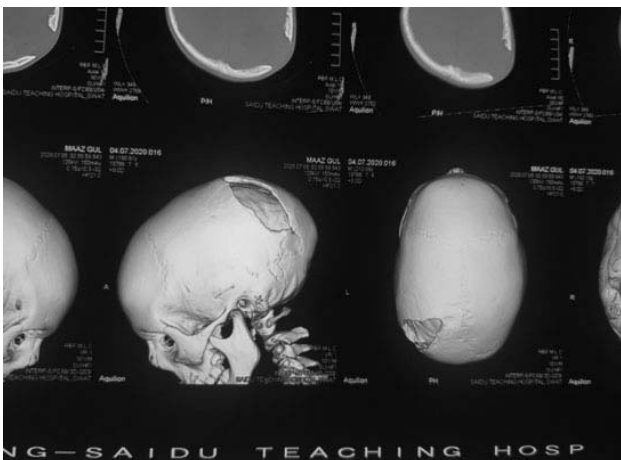


Figure 6-7: CT scans anatomical imaging of fractures in skull

## Discussion

<sup>13</sup>Stated that the children might respond to anxiety in multiple ways for example being clingier, nervous, bed wetting, retreating, agitated and being angry. Kids need adult's love and care during hard times along with extra courtesy. While, during COVID-19 lock-downs worldwide have led to an upsurge in the domestic violence cases on children and women due to no escape from the abuser parents throughout the quarantine.<sup>14</sup> Reported that stressful events of life are associated to emotional pain in parents and subsequently less obtainability for children, with more castigatory attitudes toward children.

<sup>15</sup>Verified that in various countries including Brazil and France have reported arise in the domestic violence cases especially kids are more at risk of neglect or abuse during living in a home with high domestic violence incidences. In current study, a higher percentage of immense kind of domestic abusive violence reported with ratio of 50-55 per day cases with 60% females 30% children were reported in radiology department with fracture bones in multiple anatomical positions. Furthermore,<sup>16</sup> reported the statistics of National Society for the Prevention of Cruelty to Children which stated that self-isolation places the children at high risks of negligence in addition to domestic, emotional, physical, and sexual abuse.

## Conclusion

The COVID-19 virus is a unique worldwide pandemic by which over millions of people have been infected from 209 countries. Although, billions of people are safe but significantly impacted in all characteristics of life. The lockdown approaches that have been implemented by administrations stress the inhabitants to stay at home and be dependent upon to live their lives virtually.<sup>17</sup> During such devastating circumstances, the increased psychiatric disorders have been reported worldwide such as domestic violence and brutality against children and females along with depressive, post-traumatic stress, and anxiety related disorders symptoms.<sup>18</sup>

The United Nations provided recommendations to build strong awareness and advocacy for increasingly


rising violence against girls and women in the course of COVID-19 lockdown.<sup>9</sup> It has been suggested to challenge all kinds of harmful masculinities and gender stereo types proactively emphasized during COVID-19 settings such as increased domestic care of women along with unemployment and financial insecurity with targeted messages for males with the purpose of encouraging healthy ways of surviving with traumatic circumstances.<sup>19</sup> It has been also suggested to engage media channels to continually raising the conspicuousness of enlarged violence against girls and women by signifying the driven risk factors of domestic violence.<sup>20</sup>

It is insisted that to provide information utilizing public service declarations, to stayers of domestic violence, such as, on service appointments, or how to remain employment safely by means of available formats for diverse groups of females.<sup>21</sup> UN also suggested engaging and sensitizing the private sector through available global direction on how to respond and prevent the violence against children and adolescents, including female workers who work from home in the course of COVID-19 and endure domestic violence.<sup>22</sup> With the help of ensuring regional and local establishments to create public spaces safe for females throughout diverse phases of ongoing pandemic.

**Conflict of Interest:** None

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