

The Relationship of Aggressiveness and Depression during the COVID-19 Pandemic: A Literature Review

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ABSTRACT

Introduction: The COVID-19 pandemic has a significant impact on the mental health of people around the world, including increased levels of aggressiveness and depression. This study aims to identify the relationship between aggressiveness and depression during the COVID-19 pandemic.

Methods: This research uses the literature review with the PICO method which selects relevant sources based on patient, population or problem, intervention, comparison, and outcome. Articles were collected using search engines such as EBSCO, Pubmed, ScienceDirect, and Proquest. The criteria for articles used were those published in 2019-2024.

Results: The literature review conducted in this study identified 22 relevant articles addressing the issue of aggressiveness and depression during the COVID-19 pandemic. These articles provide critical insights into the complex relationship between these two mental health challenges, particularly in the context of the unique stressors introduced by the pandemic. The analysis of these sources highlights the significant increase in both depression and aggressive behaviors, emphasizing the need for comprehensive mental health interventions to address the dual impact of these conditions during global health crises.

Conclusion: The pandemic has exacerbated mental health conditions, with depression becoming more prevalent and often leading to aggressive behavior due to impaired emotion regulation. Contributing factors include psychological distress, social isolation, economic uncertainty, and disrupted routines. The findings highlight the need for holistic mental health interventions and adequate social support to mitigate these effects.

Keywords: Aggressiveness; depression; COVID-19 pandemic; mental health



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Introduction

The COVID-19 pandemic has significantly impacted global mental health, leading to a rise in various psychological disorders, particularly depression. Previous studies have consistently shown that individuals suffering from depression often exhibit aggressive behaviors, primarily due to challenges in emotion regulation. Research during the pandemic has highlighted key contributing factors such as psychological distress, social isolation, economic instability, and disruptions to daily life, all of which have exacerbated these mental health issues.¹

Based on data on the incidence of violence in the United States released by the Federal Bureau of Investigation in 2013, there were an estimated 1,163,146 violent crimes that occurred nationwide where firearms were used in 69% of homicides, 40% of robberies, and 21.6% of aggravated assaults. It was also reported that a woman is beaten every 9 seconds and almost 20 people per minute are physically abused by their partners. During one year, one in five women and one in seventy-one men in the United States are raped.¹

During the pandemic, there has been an increase in cases of aggressiveness, this can be seen, among others, from the rampant news about the high incidence of domestic violence, both violence against children and women. Research in Egypt stated that violence in the form of discipline occurred in child respondents by 90.5%, aggressiveness in the form of psychic by 88.7%, and severe physical punishment by 43.2%.²

In Indonesia, the Ministry of Women's Empowerment and Child Protection (PPPA) stated that there were 1,913 cases of violence against women before the pandemic. Then during the pandemic, there was an increase in cases by five times to more than 5,500 cases. Meanwhile, cases of violence against children have experienced a significant increase. Before the pandemic, there were 2,851 cases of child abuse, which were later reported to have increased to more than 7,190 cases during the pandemic.³

This study aims to build upon existing literature by exploring the intricate relationship between depression and aggressiveness during the pandemic, underscoring the urgent need for comprehensive mental health interventions and support systems to mitigate the pandemic's adverse effects on mental well-being. This study is expected to provide knowledge to health workers, especially to psychiatrists about the relationship between aggressiveness and depression during the COVID-19 pandemic. It can enrich the repertoire of science in the field of psychiatry in terms of the relationship between aggressiveness and depression during the COVID-19 pandemic.

Methods

This study uses the literature review method to identify and analyze the relationship between

aggressiveness and depression during the COVID-19 pandemic. The data sources were from the various relevant scientific journals, articles, and research reports published in the last 5 years. The search process was conducted using specific keywords such as “aggressiveness,” “depression,” “COVID-19 pandemic,” “mental health,” and “social isolation” in scientific databases such as PubMed, Google Scholar, and ScienceDirect. These databases were chosen for their extensive coverage of peer-reviewed medical and psychological literature, ensuring the inclusion of high-quality and relevant studies. Additionally, their advanced search algorithms and filtering options allow for the precise identification of studies that focused on the impact of the pandemic on mental health, with particular attention to aspects of aggressiveness and depression.

Inclusion criteria in this study included articles written in Indonesian and English, articles that had empirical data on aggressiveness and depression during the pandemic, and articles that had been peer-reviewed. The exclusion criteria for this study include articles not written in Indonesian or English, articles that do not provide empirical data on aggressiveness and depression during the pandemic, articles that have not undergone peer review, and articles that do not explicitly test the relationship between aggressiveness and depression. Once relevant articles were identified, a study quality assessment was conducted using quality assessment tools such as the Critical Appraisal Skills Program (CASP) to ensure the validity and reliability of the findings presented.

Data analysis was conducted by categorizing key findings from the selected studies. Furthermore, the data collected was analyzed by identify the patterns, trends, and relationships between aggressiveness and depression during the pandemic. Emphasis was placed on the causal factors underlying the increase in aggressiveness and depression and how these two conditions interact with each other. The results of this review were used to develop recommendations for more effective mental health interventions and adequate social support for vulnerable individuals.

Result

This study identified 22 relevant articles addressing the issue of aggressiveness and depression during the COVID-19 pandemic. The research studies cited provide a comprehensive exploration of the relationship between stress, aggression, and depression, particularly in the context of social isolation and the COVID-19 pandemic. Chang and Gean (2019) and Chang et al. (2020) examined how stress-induced aggression in mice is controlled by neural mechanisms and regulated by microRNAs, providing insights into the biological underpinnings of aggressive behavior. De Bles et al. (2019) and Deng and Feng (2022) further explored the psychological factors that contribute to aggressive tendencies, highlighting the role of perceived threats and emotional distress during the pandemic. Drndarević et al. (2021) and Girasek et al. (2022) investigated how sensory processing sensitivity and trait emotional intelligence mediate the

relationship between depression and aggression. Collectively, these studies underscore the complex interplay between psychological stressors, biological mechanisms, and behavioral outcomes in the context of aggression and depression during times of crisis.⁴⁻⁹

The results showed that there was a significant increase in the prevalence of depression and aggressive behavior during the COVID-19 pandemic. From the analysis of various studies, it was found that depression rates increased dramatically during the pandemic, with some studies reporting an increase of up to two times compared to the pre-pandemic period. Aggressive behavior, both verbal and physical, has also increased, especially in individuals experiencing social isolation and high psychological distress. Data shows that depressed individuals tend to exhibit aggressive behavior more often as a response to the inability to regulate emotions and stress caused by the pandemic situation.^{4,5,6,7,10}

In addition, factors such as economic uncertainty, changes in daily routines, and lack of social support contribute to increased aggressiveness and depression. The studies analyzed show that economic stress, such as job loss or reduced income, is a significant factor affecting individuals' mental health. Social isolation resulting from physical and social restrictions also exacerbated mental conditions, with many individuals reporting feelings of loneliness and helplessness. Research has also found that individuals with low social support are more prone to depression and aggressive behavior than those with strong social support networks.^{8,9,11,12,13,14,15}

In children and adolescents, several studies have shown that high levels of depression are associated with increased aggressive behavior. These studies found that depression, which is exacerbated by social isolation, uncertainty and academic pressure, often leads to irritability and frustration that manifests as aggression. Research also shows that peer victimization can increase depressive symptoms, which in turn triggers aggressive behavior. Therefore, interventions targeting depression reduction and adequate social support are critical to reducing aggressiveness in adolescents.¹⁶⁻²⁵

These studies suggest a complex relationship between depression and aggressiveness, with factors such as gender, social conditions, and environmental support playing important roles in the development and manifestation of both conditions.

Discussion

A pandemic situation that causes stress in various aspects of life is a negative event that certainly risks increasing the occurrence of mental disorders. Aggressiveness and depression are two of the mental disorders that have increased the most among other mental disorders. Apart from physical and economic conditions, isolation or quarantine also plays a role in increasing stress. Isolation or quarantine, which is essentially intended to maintain physical health, actually causes psychological problems, due to the lack

of mental and physical interaction with people around them. This risks the development of psychopathology, such as depression, anxiety, and aggressiveness. Shimizu et al. examined aggressive behavior and depressive symptoms in chronically isolated rats. The study suggested that chronic isolation not only causes aggressive behavior but also depression-like behavior.²⁶

Depression which is synonymous with sadness, weakness, lethargy looks very different from aggressive behavior. Individuals with depression tend to attribute negative events to internal causes (self-blame), causes that cannot be changed and are chronic. According to Burns and Seligman, these internal causes are referred to as “explanatory styles” that occur throughout the lifespan and thus are a “perpetual risk for depression”. Aggressive individuals, on the other hand, externalize blame, ascribe negative events to the behavior of others, and view others as having hostile attitudes or intentions. Despite these seemingly contradictory attributions, depression often co-occurs with aggressive behavior.^{4,10,27}

Depressive sequelae such as self-isolation, loss of social support, increased alcohol use, angry rumination, and impulsivity may contribute to increased risk of aggression. Affective displacement related to negative feelings from internalizing and externalizing attributions becomes fused and indistinguishable. Therefore, the affective impact of negative events can lead to depression and anger. One result of this affective displacement is the emergence of “scapegoating”, where depressed individuals find externalized individuals to blame for “causing” hostility. For this reason, depression is both a routine indicator of mental health assessment and seen as a risk factor for aggression.⁴⁻⁷

Aggressive behavior can result in rejection and lack of support by important others (e.g., parents), ultimately leading to widespread experiences of failure in social interactions with others. Experiences of failure, lack of support, and rejection from others may ultimately lead to an increased risk of depressive moods.

Longitudinal research has mixed results, possibly due to differences in the age of respondents, research methods that use self-report data, data obtained from only one source, using different measures or instruments, and no research has specifically examined the bidirectional relationship between aggressive behavior and depression. The first multi-informant study on the longitudinal relationship between aggressive behavior and depressive symptoms. The results suggest that aggressive behavior in early adolescence predicts the occurrence of depressive symptoms later in life. Although this study used multi-informants, the small number of informants for each depression or aggressive domain assessment still allows for bias. The results of this study are limited to early adolescence, so they cannot be generalized to other age limits.¹¹⁻¹⁴

Liu & Cole's research (2021) is the first study in a large population, namely a survey conducted on 5692 respondents in the United States. The results stated that aggressiveness is related to the occurrence of Major Depressive Disorder (MDD). Research in the same year on 2539 respondents with unipolar

MDD stated that 58.7% of respondents behaved aggressively. Despite the large number of respondents, unfortunately this study still does not answer the causal relationship between aggression and depression. However, this study found that all types of aggressive behavior were independently associated with increased odds of MDD diagnosis. Conversely, MDD characteristics were also associated with the presence and frequency of aggressive behaviors. Property destruction and physical assault were associated with severity and early onset of depression. In addition, early onset of depression was associated with frequency of aggressive behavior.^{14,16}

Psychic aggressiveness, which is considered less aggressive and therefore more acceptable than physical aggressiveness, is actually a risk for negative mental development, such as depression, anxiety, and bullying. Parents often commit psychological aggressiveness to their children without realizing it. Research by Wang et al. (2021) in China examined psychological aggressiveness from parents to children. The results of this study are interesting because it turns out that psychological aggressiveness is transmitted from generation to generation and this transmission is moderated by anxiety and depression from the mother, not the father. This may be related to the Chinese culture of: “nan zhu wai, nv zhu nei” which means men take care of things outside the home and women take care of things inside the family. A longitudinal study by Hasegawa et al. (2022) on university students in Japan stated that aggressive behavior was a factor leading to interpersonal stress generation and all negative event experiences predicted an increase in future depressive symptoms.^{11,18}

Child and adolescent studies show that the COVID-19 pandemic has had a significant impact on adolescent mental health, especially in terms of depression and aggressiveness. Social isolation, economic uncertainty and activity restrictions are the main factors that exacerbate these conditions. Social isolation triggers hormonal reactions and brain circuits that lead to aggressive behavior, especially in individuals prone to anxiety and depression. Gender differences were also found, with men more prone to increased aggressiveness in difficult financial situations or family loss, while women were more prone to increased depressive symptoms. These findings emphasize the importance of early intervention and appropriate social support to prevent the escalation of mental health problems among adolescents during the pandemic.²³⁻²⁵

Several factors such as gender and family conditions, some studies have found that individuals living with children experience higher levels of depression and anxiety. In addition, women tend to experience higher levels of depression than men, especially during times of crisis such as the pandemic. It has also been found that aggressiveness levels increase in men as lockdown tightness increases, especially when there is a decrease in income or loss of loved ones due to the pandemic.

Depression is generally considered the opposite of aggression due to the apparent contradiction in

energy levels or blaming behaviour. However, there is ample evidence of a significant relationship between depression and aggression. Most studies are cross-sectional and retrospective, so there is little empirical evidence to suggest that depression causes aggression or aggression causes depression.

Psychic and physical aggressiveness are both intolerable because they have a negative impact on oneself and others. Psychic aggressiveness can be transmitted from generation to generation and this transmission is moderated by the anxiety and depression of the mother or people who frequently interact with the child. Culture has a strong influence on aggressiveness and depressive behaviours. Aggressive behaviour may be more damaging to interpersonal relationships in Japan (Asia) than in the West because Japanese people tend to emphasize harmonious interpersonal relationships. Isolation or quarantine during the pandemic increased the risk of aggressive behaviour and depressive symptoms. Further research is needed that analyses the correlates of different types and levels of aggression and moderators of the relationship between aggressiveness and depression.

The COVID-19 pandemic has had a significant impact on mental health, exacerbating disorders such as depression and aggressiveness. Social isolation and quarantine, while aimed at maintaining physical health, add psychological stress that risks triggering mental disorders. Research shows that isolation can increase aggressive behaviour and depressive symptoms, with individuals experiencing affective displacement of negative feelings that coalesce, resulting in concurrent aggression and depression. Factors such as gender, family conditions, and the strictness of lockdown affect the level of depression and aggressiveness, with women being more prone to depression and men to aggressiveness. Therefore, it is important to intervene early and provide adequate social support to prevent and address mental health issues during times of crisis.

Conclusion

The COVID-19 pandemic has significantly impacted mental health, particularly by increasing the prevalence of depression and aggressive behavior. The enforced social isolation and quarantine measures, although necessary for physical health, have exacerbated psychological stress, leading to a higher risk of mental disorders. Research indicates that isolation not only heightens aggressive tendencies but also intensifies depressive symptoms, with individuals often experiencing a fusion of these affective states. Factors such as gender, family dynamics, and the severity of lockdown measures further influence the degree of depression and aggressiveness, with women being more susceptible to depression and men to aggression. These findings underscore the urgent need for early intervention and comprehensive social support to mitigate the adverse mental health effects during crises like the pandemic.

Conflicts of Interest

There is no conflict of interest.

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