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Adolescent Trauma and Impact of the COVID-19 Pandemic in the School Context

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Abstract. This study examines the significant effects of the COVID-19 pandemic on adolescent trauma and its subsequent consequences in the school setting. The pandemic has brought about a worldwide health emergency that goes beyond physical health, significantly impacting the mental and emotional well-being of teenagers. This demographic, which is already vulnerable to different types of psychological distress during a crucial period of growth, encountered intensified difficulties as a result of the disruptions caused by the pandemic. The study employs a mixed-method methodology, combining quantitative data from surveys with qualitative insights gathered through interviews and focus groups that include students, teachers, and school counselors. The objective is to evaluate the prevalence of trauma-related concerns among adolescents during the pandemic and investigate how these concerns have become apparent in educational environments. Primary concerns include the consequences of extended school closures, the transition to remote learning, social seclusion, and the broader psychosocial pressures associated with the pandemic. The findings indicate a notable surge in the number of reports concerning anxiety, depression, and other symptoms associated with trauma among adolescents. The interruption of typical school schedules and the lack of a physical school setting have decreased academic involvement and drive. Moreover, the absence of face-to-face social engagement and participation in extracurricular activities has intensified sentiments of isolation and social detachment. The study emphasizes the crucial role of schools in offering assistance and resources to tackle these difficulties. It highlights the necessity of implementing trauma-informed educational strategies and mental health support systems in schools to address the increased emotional and psychological requirements of students. Furthermore, the study identifies successful tactics schools utilize to lessen the consequences of the pandemic, such as incorporating mental health education into the curriculum, offering virtual counseling services, and cultivating a supportive online community.

Keywords. Adolescent, Trauma, COVID-19 School Context, Leadership, Cognition, Education

1. Introduction

The COVID-19 pandemic has presented unparalleled difficulties to individuals and communities globally, with adolescents being especially susceptible to its effects. The convergence of adolescent trauma and the COVID-19 pandemic within the school setting poses an intricate situation that warrants thorough investigation. Adolescence is a crucial development period characterized by notable physical, psychological, and social transformations. The ramifications can have extensive consequences when a worldwide crisis such as the pandemic interrupts this timeframe.

Furthermore, the repercussions of the pandemic on the mental health and well-being of adolescents have become an increasingly worrisome issue, leading to extensive research aimed at comprehending the consequences of this worldwide crisis. Research has emphasized the diverse impacts of the pandemic on teenagers, revealing the psychological, social, and behavioral transformations that this group has undergone. Research has investigated the risk and protective factors associated with changes in adolescent mental health during the pandemic. It highlights the importance of comprehending the factors adolescents perceive as causing the most significant distress (Magson et al., 2020). In addition, research has examined teenagers' psychological adaptation and stress levels at the beginning of the COVID-19 pandemic, offering valuable information on possible ways to reduce negative consequences (Ellis et al., 2020).

Moreover, research has shown that the pandemic has a substantial influence on the lifestyle behaviors of adolescents, which in turn has consequences for their mental health and overall well-being (Xiang et al., 2020). The protracted duration of the pandemic and the consequent implementation of lockdown measures have elicited apprehensions regarding the adverse effects on the mental well-being of adolescents, specifically about the closure of schools and disturbances to their daily schedules (Guessoum et al., 2020). Moreover, a significant number of adolescents have exhibited psychological trauma symptoms in connection with the pandemic, underscoring the imperative to tackle the mental health consequences of this crisis (Lewis et al., 2023). School closures during the pandemic have caused chronobiological changes in adolescents, providing valuable information about how the pandemic has affected their daily schedules and routines (Perrar et al., 2023). Furthermore, the pandemic has resulted in substantial modifications in school environments and social prospects for teenagers, requiring a more profound comprehension of the consequences of these modifications on their mental health and overall well-being (Cingel et al., 2022). In addition, the pandemic's influence on the growth of adolescents, specifically in their school experience, has generated apprehension regarding the lasting consequences on their welfare and overall progress (Jang et al., 2023). The pandemic has been linked to depressive symptoms, alterations in mental well-being, and substance abuse in adolescents. This emphasizes the necessity for longitudinal studies to comprehensively assess the developing effects of the pandemic on this demographic (Þórisdóttir et al., 2021).

The pandemic has not only presented a direct peril to physical well-being but has also profoundly transformed the daily routines of adolescents. The extended closure of schools, isolation from social interactions, and the transition to remote learning have intensified existing disparities and increased the likelihood of psychological distress. Many teenagers have encountered supplementary sources of pressure, such as the demise of close family members, financial instability within their households, and the prevailing sense of uncertainty and unease regarding what lies ahead.

Within the realm of education, these challenges manifest as distinct concerns. Adolescents' mental health and academic engagement have been negatively affected by the lack of a consistent school schedule and limited opportunities for social support and extracurricular activities. Teachers and school administrators face the challenge of adjusting to new teaching and learning methods while also addressing the heightened emotional and mental health requirements of their students (Gkintoni & Dimakos, 2022; Gkintoni et al., 2021c).

This study seeks to examine the diverse aspects of adolescent trauma during the COVID-19 pandemic, with a primary emphasis on its effects within the educational environment. The objective is to comprehend the diverse effects of the pandemic on the well-being and education of adolescents while emphasizing the crucial role of schools in assisting students during these difficult circumstances.

2. Psychosocial and Psychological Impacts of the COVID-19 Pandemic

From the beginning of the COVID-19 pandemic to today, humanity has encountered numerous detrimental impacts on mental and physical well-being. In response to the swift spread of COVID-19, political and health authorities worldwide have implemented stringent measures, according to the guidelines set forth by the World Health Organization (WHO), to avert the overload of their healthcare systems (Cerván et al., 2021). The main objective of the P.O.Y. (2020) was to enforce social isolation, quarantine, and movement restrictions, resulting in the closure of various work environments, including educational institutions at all levels, such as schools and universities (Lavigne-Cerván et al., 2021).

As a result, numerous adults encountered profound alterations in their work environment, economic circumstances, and social connections. Consequently, children and adolescents experienced a sudden disruption in their daily routines, leading to their isolation from key institutions that promote their activities and social interactions, such as schools and sports clubs (Danese et al., 2020). Globally, there has been a persistent rise in COVID-19 cases, accompanied by an increase in fatalities, leading to the loss of loved ones. This has also resulted in significant disruptions to work, including work stoppages, the implementation of remote work, and even job losses. Consequently, there have been severe economic challenges, social disparities, and unprecedented alterations in interpersonal interactions (Danese et al., 2020).

Specifically, as the number of COVID-19 cases and fatalities rose, children and adolescents experienced an amplified sense of fear towards the disease and the potential loss of their loved ones. Simultaneously, children and adolescents were cognizant of the profound strain experienced by their parents and the economic hardships that emerged due to the pandemic, leading to anxiety and uncertainty regarding their own prospects (Deolmi & Pisani, 2020). As a result, individuals of all age groups experienced a complex burden on their mental health, leading to an escalation in symptoms such as anxiety, depression, obsessive-compulsive disorder, suicidal thoughts, and even suicide (Dubey et al., 2020; Li et al., 2020).

The study by Singh et al. (2020) identified several factors linked to the negative impacts of COVID-19 during childhood and adolescence. These factors include sociodemographic variables such as age, educational achievement, and economic status, as well as preexisting mental health conditions, limited access to mental health services, and the experience of quarantine. Furthermore, de Figueiredo and colleagues (2021) contended that the confluence of COVID-19's detrimental impacts and adverse childhood experiences

(A.C.E.s) could potentially impact the immune, endocrine, and nervous systems of children and adolescents, thereby increasing their vulnerability to mental health disorders. During adulthood, individuals may experience mental health conditions such as anxiety and depression (Gkintoni & Ortiz, 2023; Gkintoni, 2023; Oikonomou et al., 2024). Simultaneously, Wang and colleagues (2020) emphasized that stressors such as monotony, annoyance, isolation from peers, friends, and instructors, and insufficient personal space at home during quarantine as a result of the COVID-19 pandemic were anticipated to lead to various impairments in children/adolescents, including their cognitive perception.

Moreover, in developing nations where quarantine measures have been enforced, children and adolescents from economically disadvantaged families have encountered significant challenges related to their survival, protection, and safety within their households. This has resulted in a prolonged period of stress, which has had detrimental effects on their overall development. The citation is from Singh et al. (2020). Nevertheless, the implementation of mandatory social isolation measures during quarantine has resulted in a worldwide surge in incidents of domestic violence and child abuse, irrespective of individuals' socioeconomic standing (Brooks et al., 2020; Craig et al., 2020). According to Giannopoulou et al. (2021), parents may experience ongoing distress towards their children because of secondary psychological trauma in their role as caregivers. This distress is often caused by feelings of inadequacy in dealing with the unprecedented and challenging demands brought about by the COVID-19 health crisis.

Simultaneously, children and adolescents with specific requirements, such as autism, attention deficit hyperactivity disorder, mental retardation, cerebral palsy, specific learning disabilities, and other behavioral and emotional difficulties, faced unique obstacles during the COVID-19 quarantine. The exacerbation of symptoms in these children/adolescents was attributed to their struggle to accept and handle changes in their daily routine, which was compounded by the imposed restrictions. Additionally, they faced challenges in adhering to instructions, comprehending the intricacies of COVID-19, and functioning autonomously (Singh et al., 2020).

Amidst the COVID-19 quarantine, there was a significant decrease in outdoor activities, resulting in restricting children's access to nature and sunlight. It is widely recognized that participating in outdoor activities positively impacts children's physical and psychological well-being, particularly during the early stages of life when the brain experiences rapid growth (Haleemunnissa et al., 2021). Hence, the absence of sunlight and insufficient vitamin D levels resulting from quarantine are thought to contribute to various health issues, including asthma, hypertension, cardiovascular diseases, and metabolic syndrome. Additionally, they are also associated with psychiatric disorders such as schizophrenia and depression (Alfredsson et al., 2020).

Simultaneously, due to the quarantine, children predominantly allocated their leisure time to screen utilization, dedicating numerous hours each day to the Internet and social media to communicate with their peers (Samji et al., 2022). The rise in screen utilization was also associated with the shutdown of educational institutions, where traditional in-person instruction was substituted with remote education in numerous countries to contain the transmission of COVID-19. UNESCO data reveals that approximately 1.52 billion children and young individuals from 190 countries, which accounts for roughly half of the global student population, have experienced school disruptions due to the closure of schools caused by SARS-CoV-2 (UNESCO, 2020). Schools were initially closed in early March 2020, and in

certain countries like Greece, they remained closed for most of the 2020-2021 academic year. Hence, the sudden exclusion from the primary sphere of social interaction for children and teenagers disrupted the familiar and expected school environment, leading to adverse effects on their mental and physical well-being (Gkintoni et al., 2024b; Lee, 2020).

Additionally, according to the self-report questionnaires completed by parents, it was revealed that children encountered emotions of fear, uncertainty, and isolation throughout the COVID-19 pandemic. The impact of COVID-19 on the pediatric population resulted in disturbed sleep, reduced appetite, heightened inattention, irritability, and separation anxiety, as reported by Jiao et al. (2020).

Furthermore, studies have demonstrated a correlation between quarantine and the manifestation of Post-Traumatic Stress Disorder (PTSD) symptoms in individuals belonging to vulnerable segments of the population, including children, adolescents, and individuals who contracted COVID-19 and required hospitalization in either Intensive Care Units (I.C.U.) or general hospital wards (Brooks et al., 2020). Kaseda and Levine (2020) discovered a correlation between neuropsychological impairments and PTSD in individuals who survived the Middle East Respiratory Syndrome Coronavirus (MERS). This suggests that there is a strong probability that survivors of COVID-19 will experience clinical manifestations of PTSD.

3. Impact of the COVID-19 Pandemic on Adolescents

Adolescence is characterized by biopsychosocial transformations, including substantial brain maturation, a strong desire for social inclusion within the peer group, and heightened sensitivity to social phenomena. During the transition to adulthood, teenagers acquire empathy, which refers to their ability to comprehend and relate to the emotions, intentions, and beliefs of others. The COVID-19 pandemic caused significant disruptions in the developmental processes of adolescents and was found to be linked with various adverse psychosocial and psychological outcomes in this age group (de Figueiredo et al., 2021).

Furthermore, the COVID-19 pandemic has had a substantial impact on teenagers, as evidenced by research indicating that around 20% of adolescents had signs of psychological stress in the initial year of the pandemic (Lewis et al., 2023). Cross-sectional research has examined the impact of COVID-19 on the mental well-being of adolescents. These studies have found that the pandemic has had negative consequences on the mental health of Australian adolescents (Beames et al., 2023). In addition, the pandemic has also impacted teenagers' interpersonal relationships and school social activities, perhaps leading to long-term consequences (Jang et al., 2023). These findings emphasize the necessity for focused assistance and interventions to tackle the mental health difficulties experienced by teenagers during the epidemic.

Adolescent stressors, such as heightened screen time, disruptions in sleep patterns, and unhealthy dietary habits, are linked to adverse effects on the mental well-being of adolescents during the COVID-19 pandemic. Specifically, based on data from UNICEF (2020b), adolescents experienced exposure to unsuitable content during the quarantine, rendering them more susceptible to online harassment and/or exploitation (UNICEF, 2020b). Recent research has linked social isolation and excessive Internet usage to self-harming behaviors or suicide, particularly about online challenges targeting young people (Deslandes & Coutinho, 2020).

Ruiz-Roso and colleagues (2020) have documented that teenagers in Europe, South America, and Asia have developed detrimental eating behaviors during quarantine. Hence, there is an anticipated detrimental impact on their health in adulthood, increasing susceptibility to diseases like obesity, diabetes, and cardiovascular diseases (Ruiz-Roso et al., 2020). Furthermore, due to the quarantine measures, there has been an increase in sleep disruptions and a decline in sleep quality (Xiang et al., 2020). Xiang et al.'s (2020) online survey revealed that adolescents exhibited irregular sleep patterns, marked by waking up late in the morning and sleeping late in the evening. One significant factor was the growing prevalence of teenagers using a screen in their bedroom, accessing the Internet to stream movies, or engaging in social media activities with friends (Xiang et al., 2020).

Research conducted during the initial phase of quarantine has linked a rise in teenagers' apprehensions about remote learning and the possibility of cancellation of important exams, such as university entrance exams (Buzzi et al., 2020; Lee, 2020). In addition, the study conducted by Lee et al. (2020) revealed that adolescents exhibited apprehension regarding contracting COVID-19 if the exams were not canceled and they were required to attend. Nevertheless, according to the study conducted by Buzzi and his colleagues (2020), the adolescents who participated in the research expressed that Distance Education had positive effects in fostering connections with their school and fellow students, despite their initial concerns.

Moreover, studies have indicated that the limitation of social interactions due to the quarantine, which included the mandatory closure of schools, heightened the susceptibility of adolescents to anxiety, depression, and post-traumatic stress disorder (Bera et al., 2022). In a comprehensive cross-sectional study conducted in China, it was discovered that adolescents between the ages of 12 and 18 exhibited anxiety symptoms at a rate of 37.4% and depressive symptoms at a rate of 43.7% during the quarantine period. Notably, adolescent girls reported higher levels of anxiety and depression compared to boys (Zhou et al., 2020). The meta-analysis conducted by Ma et al. (2021) revealed a prevalence rate of 29.1% for anxiety among adolescents aged 13 to 18. Furthermore, the analysis indicated that adolescent girls exhibited higher levels of anxiety compared to boys. Research findings indicate that 14.4% of adolescents and young adults experienced symptoms of post-traumatic stress disorder (PTSD) within two weeks of the COVID-19 outbreak in China (Liang et al., 2020). Additionally, adolescents who were taking medication to manage a Major Depressive Episode reported PTSD symptoms one month after the onset of COVID-19 (Zhang et al., 2021).

Overall, the typical emergence and advancement of mental disorders during adolescence are impacted by factors such as dysfunctional family dynamics, detrimental peer connections, and the cultivation of depressive psychopathology within the cultural and social context (Chi et al., 2022). The instances above are illustrations of Adverse Childhood Experiences (ACEs) that have the potential to precipitate the emergence of anxiety disorders in adolescents (Elmore & Crouch, 2020). Each Adverse Childhood Experience (ACE) can be considered as an independent risk factor for the emergence of anxiety symptoms during adolescence (Chi et al., 2022). According to recent research by Ma et al. (2021), the COVID-19 pandemic is considered an ACE (Adverse Childhood Experience) that leads to symptoms of anxiety, PTSD, and depression in teenagers (Gkintoni et al., 2024a).

4. Adolescent Trauma in the School Context

The issue of adolescent trauma in the school setting has become a significant cause for concern, especially following the COVID-19 pandemic. The effects of trauma on the mental health and well-being of teenagers have become increasingly important, with a particular emphasis on comprehending the various consequences of experiencing trauma in the school setting. The COVID-19 pandemic has presented distinct difficulties, intensifying the effects of trauma on teenagers and requiring a thorough comprehension of the related mental health consequences. Studies have emphasized the significant influence of the COVID-19 pandemic and the subsequent implementation of lockdown measures on the mental well-being of teenagers. Research has indicated that the pandemic has resulted in heightened levels of stress, sensations of isolation, and depression among teenagers, accompanied by notable disturbances to their regular schedules and social connections (Ellis et al., 2020) (Rogers et al., 2021).

Moreover, the pandemic has been linked to increased levels of depressive symptoms, anxiety, and loneliness, highlighting the distinct difficulties experienced by adolescents during this time (Yun et al., 2021). The protracted duration of the pandemic and its accompanying stressors have generated apprehensions regarding the psychological welfare of adolescents, specifically about the closure of schools and disturbances to their academic and social spheres (Dvorsky et al., 2021; Mansfield et al., 2021). Furthermore, research has shown that the pandemic worsens the effects of trauma on teenagers. This is due to increased emotional reactivity and poor emotion regulation, which increases their vulnerability to developing different types of mental disorders, such as generalized anxiety, eating disorders, and depression (Magson et al., 2020). The pandemic has exacerbated adjustment challenges in adolescents, resulting in notable immediate and enduring mental health issues. These difficulties are attributed to the social upheaval, disruption of school routines, and prolonged stress caused by the pandemic (Dvorsky et al., 2021).

In addition, the pandemic has been linked to chronobiological alterations in adolescents due to school closures. This provides valuable information about how the pandemic has affected their daily schedules and routines (Gadja, 2016; Perrar et al., 2023). To effectively deal with trauma experienced by adolescents in schools, it is necessary to adopt a comprehensive approach that includes providing mental health assistance, implementing social and emotional interventions, and employing specific strategies to minimize the adverse effects of trauma on the well-being of adolescents (Gkintoni et al., 2022a; Gkintoni et al., 2021b). It is crucial to take into account the distinct requirements of adolescents and create customized interventions that target the psychological, emotional, and social aspects of trauma within the school setting (Koutsopoulou et al., 2024).

Furthermore, within the educational setting, leadership plays a pivotal role in effectively addressing the problems presented by the pandemic. Principals have been observed employing 21st-century leadership skills during the COVID-19 epidemic, albeit with varying degrees of utilization (Bakht et al., 2020). Efficient school leadership is crucial in establishing an environment that facilitates the involvement of teachers as leaders in instruction, consequently influencing the outcomes of teaching and learning (Giannoulis et al., 2022a; Urick & Bowers, 2013; Sortwell et al., 2023). Furthermore, Urick's (2016) study underscores the need to analyze various leadership styles in order to comprehend their impact on teachers and principals in the fundamental task of school instruction (Antonopoulou et al., 2019). Research has emphasized the influence of leadership abilities on enhancing school

performance, demonstrating that leaders' interpersonal skills are crucial in improving schools (Giannoulis et al., 2022b; Gkintoni et al., 2021a; Ngang et al., 2015).

Moreover, there is a positive correlation between the 21st-century competencies of school principals and their strategic leadership, as evaluated by teachers (Antonopoulou et al., 2022a; Özdemir et al., 2020). Research conducted by Nisar et al. (2020) has demonstrated that training in the transformational leadership style can improve school leaders' efficacy and leadership skills (Antonopoulou et al., 2021a; Antonopoulou, 2023). The results emphasize the importance of leadership development and training in promoting effective school leadership practices (Gkintoni et al., 2022b). Moreover, the COVID-19 epidemic has significantly affected the emotional well-being of teenagers, requiring specific assistance and interventions. Efficient school leadership is essential for tackling the difficulties presented by the pandemic and fostering favorable educational results. Acquiring leadership abilities and offering instruction to school administrators are crucial elements in effectively managing the intricacies of the present educational environment (Antonopoulou et al., 2020; Halkiopoulos et al., 2021a; Halkiopoulos et al., 2022).

Within the realm of school leadership, the participation of teenagers in extracurricular activities has been discovered to impact their understanding of leadership skills, emphasizing the significance of non-academic experiences in molding their talents as leaders (Antonopoulou et al., 2021b; Hancock et al., 2012). Furthermore, cultivating interpretive leadership skills has been associated with cognitive and identity development processes, underscoring the significance of cognitive abilities in advancing leadership (Antonopoulou, 2023b; Karras et al., 2023; Lim et al., 2021). Additionally, Martins (2017) conducted a study indicating that implementing programs focused on non-cognitive skills could be a crucial policy measure for enhancing the academic achievements of teenagers. This study further emphasizes the importance of non-cognitive skills, such as cognitive flexibility, emotional intelligence, and self-leadership, within the school environment (Gkintoni et al., 2023b; Kösterelioglu, 2021). Extensive research has been conducted on the correlation between cognitive and non-cognitive skills and their influence on academic achievement and labor market outcomes (Gong et al., 2020; Gralewski & Karwowski, 2012; Tzachrista et al., 2023). Employers have identified socio-emotional and higher-order cognitive skills as crucial areas for skill enhancement (Antonopoulou, 2023a; Cunningham & Villasenor, 2016; Halkiopoulos et al., 2023).

Moreover, researchers have examined the link between parental investment and developing cognitive and non-cognitive abilities in adolescents, emphasizing the importance of family engagement in skill development (Hoorani et al., 2022). The impact of the coach's approach and leadership style on young players' cognitive skills and goal setting in team sports has been associated with their excellent development (Halkiopoulos et al., 2021b; Kettler et al., 2018). This suggests that leadership is crucial in promoting cognitive growth (Albuquerque et al., 2021; Antonopoulou et al., 2021; Antonopoulou et al., 2022b).

Additionally, it is essential to prioritize mental health education, cultivate social networks, and apply trauma interventions that are supported by scientific evidence. These measures are vital for supporting the mental health and overall well-being of adolescents as they navigate the aftermath of trauma and face the ongoing difficulties brought about by the COVID-19 pandemic (Choi, 2023; Li et al., 2021; Palei, 2014). To summarize, the occurrence of traumatic experiences among adolescents in the school setting, especially during the COVID-19 pandemic, poses intricate difficulties that require a thorough and subtle strategy to

promote the mental health and overall well-being of these individuals (Pang, 2016). Gaining a comprehensive understanding of the various ways trauma affects teenagers and implementing specific interventions is essential for promoting their ability to bounce back and fostering positive mental health outcomes in the school setting (Swanzy-Impraim, 2023).

5. Conclusion

Ultimately, the COVID-19 pandemic has profoundly affected adolescents, intensifying pre-existing trauma and giving rise to novel mental health obstacles. This study emphasizes the urgent requirement for schools to adjust and address the changing mental health requirements of teenagers following the COVID-19 pandemic. It promotes the implementation of a holistic, trauma-informed strategy in educational environments to enhance the resilience and well-being of students throughout and after the pandemic crisis. The school environment has presented both difficulties and crucial assistance. In the future, schools should maintain a focus on mental health and well-being, incorporate trauma-informed strategies, and adjust to the evolving needs of students to guarantee their comprehensive growth and ability to cope with present and future difficulties.

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