

A Qualitative Exploration of Mental Health Impact of COVID-19 on Adolescents in the United States: The Public's Perspective

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Abstract

Background: COVID-19 has affected people everywhere. Adolescents may be relatively spared of associated physical sufferings, but not indifferent to the psychological harm caused by quarantine, lockdown, and social isolation. We carried out qualitative exploratory analysis to determine public's opinions about the impact of COVID-19 on mental health of adolescents, and to learn what people recommended to help alleviate problems through a relatively untraditional platform in the domain of qualitative research which gave us access to wide variety of comments and people's thoughts.

Methods: Comments in response to relevant articles published in New York Times (n=6) and posted on YouTube (n=6) after May 2020 were included in the study. All comments were anonymized and assessed using conventional content analysis performed on MAXQDA.2020. Sub threads and > 25 comments for each record were not incorporated for feasibility purposes.

Results: The comments (n=210) were organized into themes of *impact*, *response*, and *recommendations by commenters*. Commentors were aware and concerned about mental health deterioration of adolescents amidst the pandemic. They discussed increased depression, anxiety, mood swings and suicide attempts among teenagers. Teenagers also commented about damage to their mental health and wished to resume in-person educational activities. Commentors further described the U.S government's response to mental health concerns as poor due to insufficient workforce, long waiting times to get appointments and expensive counselling. Suggestions to improve the situation included increased family time, healthy diet, and exercise (individual level); secure storage of guns, provision of family-focused mental health services (household level) and subsidized counselling sessions (policy level).

Conclusion: Mental health deterioration caused by COVID-19 needs prompt attention to prevent and curtail long-lasting psychological ill-health effects among adolescents.

Introduction

The world hosts around 1.2 billion adolescents, which equates with 16% of the earth's population [1]. Adolescence is a unique developmental age ranging from 10 to 19 years [2]. Adolescents are beset with rapid physical, psychosocial, and cognitive changes that lay the foundations of their future good health [3]. COVID-19 has impacted the lives of all in an unprecedented manner. Current evidence suggests that children and adolescents are less likely to be severely infected with the virus [4]. They remain asymptomatic or present with mild symptoms in most cases [5]. Nonetheless, they are not immune to the psychosocial impacts of the pandemic [6-8]. Lockdown procedures like closures of schools, colleges, universities, and activity areas have led to inexorable social circumstances, and this is negatively affecting the mental and social health of adolescents [9-12]. With the emergence of delta variant with increased transmissibility, an increased number of COVID-19 cases are being diagnosed among adolescents and children [13]. We are yet to witness the combination of physical and psychological impact, as the scenario of delta variant unfolds in the U.S. The U.S. Center for Disease Control and Prevention (CDC) suggests that adolescents who can count on routines, social interactions and connectedness to school, family and other important organizations and people in their lives are 48-66% less likely to have mental health issues [14]. There is growing evidence that isolation and quarantine due to COVID-19 have led to deterioration in the mental health of adolescents [12]. They experience anxiety, mood swings, restlessness, irritability, inattention, clinginess, depression, and stress-related developmental delays and eating disorders [15,16]. Adjustment disorder, acute stress disorder, and post-traumatic stress disorder among adolescents have also been reported during the pandemic [16,17]. Further, it is predicted that the pandemic may have long term consequences of emotional instability and ill mental health on adolescents as compared to adults [18,19]. The CDC recommends that families and caregivers should spend time with, engage and communicate with adolescents to promote mental soundness during the pandemic [14]. Parents, families, and caregivers are thus crucial actors in promoting mental well-being of adolescents, and their opinions and thoughts warrant attention [20].

A review of literature suggests there is dearth of evidence regarding the perceptions of parents or guardians, and teenagers themselves, about the impact of COVID-19 on mental health of adolescents [21]. It is expected that some caregivers might assume the pandemic has had a positive impact because adolescents are staying at home and spending more time with family. Others, however, might have a negative opinion of the pandemic's impact. It was the aim of this study to explore and analyze the comments people publicly made about the impact of COVID-19 on the mental health of adolescents.

Public comments posted on social media platforms and open access discussion forums give access to qualitative researchers to a wide and diverse range of individuals, and help in identifying voices which may not be otherwise heard through more traditional approaches, such as semi-structured interviews and internet surveys with open-ended questions. Through this exploration and analysis of the suggestions and recommendations made by commentors, it is expected that insights would be gained into potential intervention areas for improvement.

Methods

The study is a qualitative, exploratory analysis of comments that people publicly post in response to articles and videos related to the mental health of adolescents amidst the COVID-19 pandemic. Comments were posted in response to New York Times articles, and YouTube videos. The New York Times was chosen as it caters to a very large target audience, with 9.32 million daily readers [22]. Regarding YouTube, it is estimated that around 72% of *millennial* parents watch it to stay in touch with their children's and adolescents' worlds [23]. Articles and videos posted in between May and June 2020 were assessed for relevance to the topic. A total of six articles and six videos were selected (n=12) from which to draw comments. These articles and videos were selected based on their relevance to the topic, as per the judgement of the researcher. All comments people publicly made in response to the articles and videos were copied and anonymized. The replies to comments (i.e., sub-threads) were not incorporated, as they generally demonstrated a political tussle among the audience and deviated from the main topic. Of the six New York Times articles; four had 5, 7, 13 and 24 comments and two articles had more than 25 comments. Only the first 25 were included for analysis, for feasibility purposes. Of the six YouTube videos, three had 5, 13 and 18 comments; three sources had more than 25 comments. Again, only the first 25 were included in the study, making the analysis more feasible.

Although analysis began with the technique of directed content analysis (i.e., content analysis based upon a pre-set group of theoretical themes and assumptions), it soon changed to conventional content analysis (i.e. content analysis based on a grounded approach with no pre-identified themes or assumptions) [24]. At the outset of analysis, the "Cornell Mental Health Framework" for mental health promotion among adolescents, was adapted and modified to guide exploration of results and to develop findings [25]. The Cornell's approach reflects and advocates for best practices for mental health promotion among adolescents. The a-priori themes initially utilized were healthy educational environment, social connectedness, and resilience; help seeking behavior, and suicidal tendencies among adolescents. It soon became apparent that data deviated from the framework considerably. The a-priori themes were cast off and a grounded approach involving conventional content analysis was utilized because the data did not align with them [19]. Codes, sub-themes,

and themes were identified in the data using the process of open coding, and word clouds were created (Appendix I) [26]. All analyses were performed using MAXQDA-Plus 2020.

This study analyzed 99 comments from The New York Times and 111 from You Tube respectively (n=210 comments). Every remark/statement from a unique and separate person was regarded as a comment. Comments excluded were those that were political in nature, and therefore did not address the subject, or those that were wishes and prayers for adolescents (n=75). The total number of comments in the final analysis was 135. The comments were identifiable in terms of deliverer; some were from parents/ guardians and others from adolescents. They were grouped separately. First, a flow-chart of the impact of COVID-19 was built based on parents'/guardians' and teenagers' comments. Comments were then categorized as positive or negative. Additionally, parents'/ guardians' comments were analyzed in relation to how they discussed positive and negative national and local responses to COVID-19 and mental health deterioration of the adolescents. The results were organized into three overarching themes: 1) impact of COVID-19 on the mental health of adolescents, 2) response of the national and local stakeholders and 3) recommendations made by commentators. These themes may be used when considering possible areas for future action.

Results

COVID-19 and Mental Health of Adolescents: The Impact

Of the 135 relevant comments; 65 addressed the impact of COVID-19 on mental health of adolescents (n=39 from the parents/ guardians; n=26 from the adolescents). People had mixed views of the impact of COVID-19 on the mental health of adolescents; however, there were many more negative, as compared to positive comments (36 vs. 3 respectively).

Parents and Guardians

Parents and guardians expressed that lockdown and home-schooling had considerably affected the mental status of adolescents, as one mentioned:

“the impact of Covid restrictions on our under 20 [years of age] population has been significantly more disastrous than Covid itself (Source 1).”

Parents and guardians narrated that children need stimulation and exercise to exhaust their energy and keep themselves motivated to study. Now, they were locked up in houses with parents and relatives, or they were alone with television, smart phones, and laptops. In this latter case, they were expected to self-discipline, monitor, and motivate themselves through online schooling; this appeared to lead to deteriorating grades and mental health:

“Why are A and B students in the classroom getting Ds and Fs [in] online schooling (Source 8)?”

“My only child is home alone all day, every day, expected to monitor and motivate himself through online schooling. That’s an awful lot to ask of a 14-year-old (Source 5).”

Lack of social interaction with other children and teachers was identified as a crucial fragment in the upbringing of teenagers, which was now taken away; leading to a spectrum of behavioral and mental health concerns from boredom, feeling “trapped,” and violent behavior to panic and anxiety attacks, depression, and suicide:

“My son is now failing several classes and is sinking into a depression (Source 1).”

“My son, a junior in high school has been in online school since the beginning of the pandemic. He has been losing motivation and is increasingly unhappy as time passes (Source 5).”

“My son is 12 he is having a horrible time.. my poor baby ... he is bored and it is making him feel violent (Source 8).”

“A 13-year-old in my town hung himself (Source 8).”

It appeared that many parents were conscious of the social isolation produced by COVID-19 and were making lifestyle adjustments by spending more time, to help their children. Nonetheless, they also realized that “kids need other kids” and the social deprivation and ill mental health effects on these children could be long lasting. The overarching opinion was that adolescents made huge sacrifices to protect the health of the elderly and society. They lost their jobs, were offered sub-standard online education, and were exposed to mental trauma by losing the most precious years of their lives.

“Who among us can live permanently in a state of gratitude for what we aren’t suffering? (Source 5)”

The adults that made positive comments considered the pandemic an opportunity for family members to connect with one another and for adolescents to find their purpose and direction by reflecting on their lives:

“This is a perfect time to do a little renovation from within (Source 11).”

“It’ll be their version of walking 5 miles to school in a blizzard or surviving the depression (Source 5).”

While some adults considered lockdown to be a window of opportunity for family time and connectivity, others regarded the “hostile” home environment as a trigger to aggravate the mental crisis of children. Kids belonging to homes suffering from domestic violence and abuse were doubly-victimized. They could no longer rely on friends and school contacts for their emotional survival in the same way that they had (Figure 1).

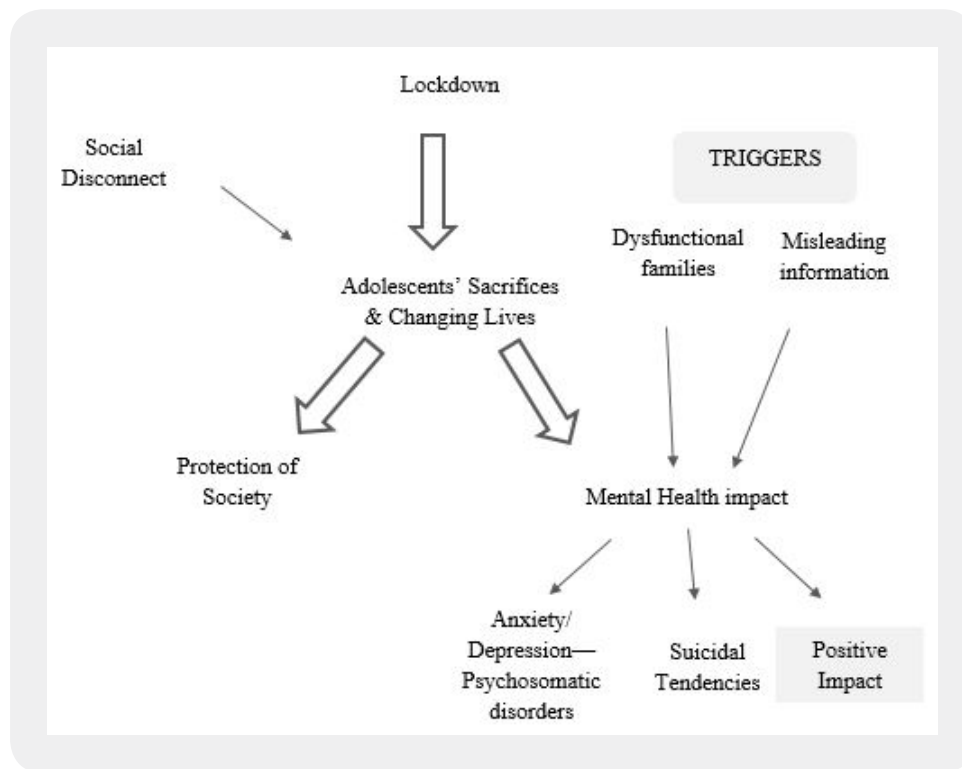


Figure 1: Impact of COVID-19 on the Lives of Adolescents (Concept Map)

Teenagers

Of the 26 comments about COVID-19 impact made by teenagers, 22 shared pessimistic and 4 shared optimistic views of the pandemic and lockdown procedures. Most of the teenagers discussed stress and feeling helpless because of quarantine and home-schooling. Headaches, crying spells, anxiety attacks, lack of motivation and purpose in life were detailed. Some also described suicidal thoughts:

“I have had a full year of my future stolen from me, perhaps even more. I want my future back (Source 1)!”

“I thought quarantine would be fun but once it gets to you it’s your enemy (Source 7).”

“When you are away from all the action, laughter and fun moments of school, anxiety says ‘hi’ (Source 7).”

“My year in life is completely destroyed (Source 7).”

“I don’t want to continue (Source 8).”

Those teenagers who shared an optimistic view of quarantine, tended to indulge in harmful activities:

“I just smoke weed n I am good no school n no one to bug me I just chill smoke n game its awesome!! (Source 11).”

“Quarantine is great. Did you know how many animes I binged? (Source 8).”

Governmental and Administrative Responses

Thirty-six parents and guardians commented about governmental and administrative responses to the mental health impact of COVID-19. According to commentors, the response at the federal, state, and local levels to the deteriorating mental health of adolescents amidst the pandemic has largely been disappointing. The adults did acknowledge the government for establishing a text crisis/help line for teenagers seeking emotional help. Adolescents could now send a text message to get connected to a trained crisis counselor. People also mentioned that some teachers were taking interest in building personal capacity to deal with mental health concerns when adolescents returned to school.

There were also, however, teachers’ unions refusing to teach in person until no new cases of COVID-19 were detected for 14 days; “An American disgrace (Source 5).” One commentor mentioned that online learning had been introduced without any parental controls, exposing the kids to “unsafe websites” putting their safety at risk. Many parents had lost their jobs without any educational compensation such as student loan forgiveness and/or increased child tax credits. The parents were also concerned that the teenagers would be vaccinated last according to CDC guidelines and would have to keep on waiting while other cadres of society returned to normal life. Lastly, a very low opinion about the mental healthcare system of the country was highlighted. Emergency mental health services were said to be ill prepared (Table 1).

Table 1: Mental Health Deterioration among Adolescents and the Response to COVID-19

Positive Aspects	Negative Aspects
Teachers taking interest in mental health issues of adolescents	Teachers not willing to teach in person, unless no new cases of COVID-19 are reported for 14 days
Text-line for emotional help	Online learning without parental controls
	Educational compensation not given
	Vaccination priority not given
	Care and management of mental health concerns (poor crisis management, poor counseling (Michigan, insufficient workforce, confidentiality concerns with psychologists)

It was also mentioned that finding proper counselling for teenagers was cumbersome. There were long waiting lists and expensive sessions, psychologists did not maintain patient confidentiality, and there was an insufficient health care workforce:

“We don’t have enough psychiatrists, therapists, beds in wards, that we need to help children facing mental and emotional distress. And now even special needs schools are attempting to go remote (Source 6).”

Suggestions and Recommendations: The Voice of the Public

Parents and guardians had many suggestions to improve the deteriorating mental health situation of adolescents (n= 36 comments). The recommendations have been organized at three levels viz; individual, household and policy level (Figure 2). Talking to teenagers, loving them, understanding their problems and concerns, listening to them without judging, reducing screen time, increasing paper book reading, and engaging in safe outdoor activities were fundamental advice given at the individual level. It was suggested to look for red flags in the moods of kids, rather than shunning their behavior; and making them understand the pathological basis of depression to aid the fight against it. Engaging in exercise and healthy diet were also recommended:

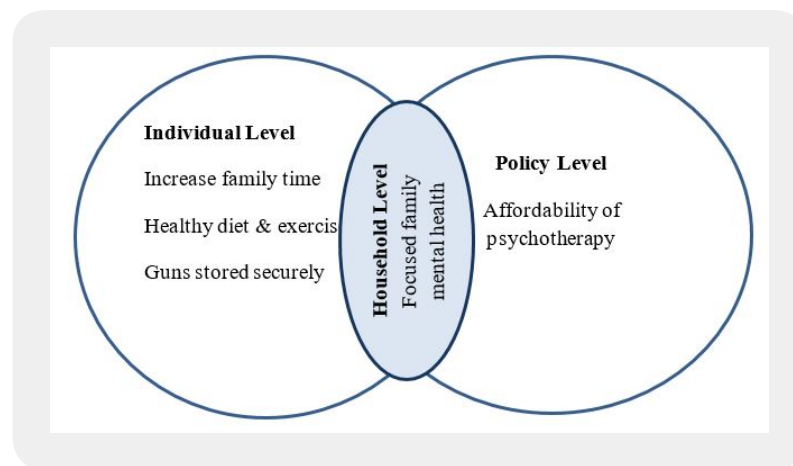


Figure 2: Recommendations Made by Commenters to Alleviate the Mental Health Deterioration of Adolescents due to COVID-19 in USA

“Exercise and sound dietary management are critical. Food is mood. We are what we eat. Avoid demon sugar, and all that turns to sugar; if possible, pursue a gluten-free diet; avoid starchy, fatty, or fried food; when eating meat or dense foods, such as pastas, eat cruciferous vegetables (Source 2).”

A critical suggestion at the household level was to keep all guns at home stored securely and out of reach of children:

“Access to a gun increases the risk of suicide by 3 times. Most people who attempt suicide DO NOT DIE, unless they use a gun (Source 2).”

Some commenters suggested using *family focused approaches to mental health treatment and care*, because the anger, mood swings and depression of adults also affected children. Virtual mental health counselling sessions were recommended for the whole family. Lastly, at the policy level, it was proposed that the government reduce property taxes for individuals, so they could afford psychotherapy for their kids.

Discussion

The study highlights the voice of the public – people are aware and concerned about the mental health deterioration of adolescents amidst the pandemic. They are witnessing increased depression, anxiety, mood swings and suicidal thoughts among teenagers. Teenagers themselves are also cognizant of the damage and wish to resume in-person educational activities. It seems that generally people are taking positive steps within their means to help adolescents through the crisis. Nonetheless, parents/ guardians themselves are facing increased levels of stress and responsibilities, owing to the economic crisis accompanying COVID-19.

Many efforts have been made by the public and private healthcare sectors to address the needs of those living with mental illness and to promote the overall mental well-being; the Health Resources and Services Administration (HRSA) and Mental Health America (MHA) are noticeable in this regard. The efforts underway include educational campaigns, outreach and screening programs, telehealth support etc.; nonetheless the fact of the matter is that the scenario remains unchanged as there are not enough mental healthcare providers [27]. According to the latest estimates, the U.S. has 10.5 psychiatrists and 4.2 nurses per 100,000 population working in the mental health sector [28]. This is in sheer contrast to the population needs, as 1 in every 10 people is estimated to need mental healthcare at a given time. Another survey highlights maldistribution of the mental health workforce [psychiatrists, psychologists, counsellors, family and marriage therapists, nurses, social workers specialized in mental healthcare] from 1 per 180 population in Massachusetts to 1 per 1,100 population in Alabama [29]. It is estimated that 9.7% of youth in the U.S. were suffering from severe major depression in 2020, compared to 9.2% in 2019 [29]. The proportion of adolescents screening positive for depressive symptoms also increased from 5% to 6.2% during the pandemic (PR: 1.24, 95% CI: 1.15–1.34), with a 34% increase in reporting recent suicidal thoughts [30]. The unmet need for mental health treatment remains high, with 59% of youth not receiving any treatment for severe depression in 2020, ranging from 39% in Rhode Island to 74% in North Carolina [29]. Although Healthy People 2030 follows the goal of improving mental health by focusing on screening, prevention, assessment and treatment of mental disorders, the healthcare system is neither equipped, nor has prioritized the mental wellbeing of the adolescents of the nation [31,32].

The U.S. has gradually been moving towards integrated behavioral healthcare (IBH); which includes a team of primary and mental health clinicians working together with patients and their families [29,33,34]. The healthcare team adopts a ‘whole-person approach’ and addresses mental health concerns, health behaviors, life stressors and crises, substance abuse conditions and stress related physical conditions along with somatic symptoms [29]. IBH has been implemented in selected parts of the country as an emerging solution for the delivery of behavioral health in primary care contexts, however, there is lack of conclusive evidence on its effectiveness in improving mental health of the population [29]. Similarly, ‘family focused mental healthcare’ has been tested in some healthcare centers in a fragmented manner [35].

Based on the results of the study, it is evident that the population by and large is not aware of mental health facilities being offered by the healthcare system. There is a communication gap between the ‘demand’ and ‘supply’ side that needs to be bridged to better avail the available resources. We advocate for more advertisement of the available counselling opportunities, tele-health facilities, family focused practices to benefit the

ones who are most in need. The mental health workforce needs to be increased, and easily available counselling opportunities at an affordable cost need to be introduced. There is a dire need to expand tele-health and counselling options for the adolescents along with capacity for emergency management of mental health crises. 'Family-focused mental health' sessions, although available, warrant more consideration as a viable option to alleviate the crunch. The government also needs to take steps towards subsidizing or free provision of mental healthcare sessions for those in need, as affordability is a key dimension of providing universal health coverage [3]. We also suggest robust epidemiological evidence be generated for each state pertaining to the DALYs (disability adjusted life years) averted by closing schools, colleges, and universities for the teenagers, compared to the DALYs gained in terms of the mental health deterioration of the population. With the vaccines now rolling into communities, it is time to place more effort on addressing the long-term mental health effects caused by COVID-19.

To the best of our knowledge, this is the first study that scientifically highlights opinion of the public towards the effect of COVID-19 pandemic on the mental health of adolescents of United States. It emphasizes on the views of parents/ guardians and teenagers and brings out their suggestions for addressing the short and long term adverse mental health effects. Nonetheless, it does not come without limitations. The study lacks generalizability of findings. The number of chosen articles and videos was according to feasibility, and the point of saturation was not reached. Analyses of comments from further articles or videos could have added useful information. Similarly, adding comments from other social media platforms such as Facebook, Twitter, Instagram etc. would have enriched the analyses. We believe that despite its limitations, this study has important policy implications. It emphasizes the severity of adverse mental health impact of COVID-19 on the adolescents and outlines key intervention areas for improvement. The recommendations given by public are community-based, and the bottom-up approach is said to be the key - not a guarantee - for successful implementation. Thus, it is critical that these recommendations are taken into account before formulating a long-term plan for tackling the adverse mental health of adolescents due to COVID-19 pandemic.

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Appendix I: Frequency Report

