

A Review of Impacts of the COVID-19 Pandemic on the Mental Health and Well-Being of
Children and Adolescents

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ABSTRACT

The purpose of this literature review is to evaluate current research and literature discussing the impacts of COVID-19 on the mental health and well-being of children and adolescents. This review seeks to identify both the positive and negative impacts that the COVID-19 pandemic has had on the mental health and well-being of children and adolescents. Using an ecological systems theory framework, this literature review examines current literature addressing the mental health and well-being of youth throughout the COVID-19 pandemic. Four themes emerged from reviewing the literature discussing negative outcomes which include child maltreatment, nonsuicidal self-injury (NSSI), suicide, and depression and anxiety. One additional theme addressed the positive outcomes. The findings from this review highlight the importance of taking action to address the potential mental health crisis that children and adolescents may face as a result of the COVID-19 pandemic and its residual effects. Additionally, important implications for intervention and prevention strategies as well as suggestions for future research related to children growing up in the COVID-19 pandemic are discussed and identified. Providing appropriate support for children and adolescents in the face of lingering secondary effects of the COVID-19 pandemic will become extremely important and relevant as societies begin to shift back towards pre-COVID-19 routines. It is hoped that this review adds to the discussion around the next steps needed to address the direct and secondary impacts of the COVID-19 pandemic on the mental health and well-being of children and adolescents.

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INTRODUCTION

The period of childhood and adolescence poses many challenges such as learning social norms and going through puberty, but growing up in a pandemic has additional challenges. In December of 2019, cases of pneumonia with an unknown cause were reported in Wuhan City, Hubei Province of China (World Health Organization, 2020a). This infectious respiratory virus was later named SARS-CoV-2, and this virus causes the COVID-19 disease. It was discovered that COVID-19 is an airborne disease spread through small respiratory droplets (World Health Organization, n.d.). By March 2020 the World Health Organization (WHO) identified COVID-19 as a global pandemic (World Health Organization, 2020b), and countries implemented travel restrictions with the hopes of these restrictions helping slow the spread of COVID-19 around the world. Soon after, social distancing was implemented, causing schools, businesses, and social venues to close down to in-person activity. The world changed at a rapid pace, and it continues to adapt and evolve with the presence of COVID-19 today.

As of November 2021, COVID-19 has infected over 269 million and taken the lives of over 5.2 million worldwide (World Health Organization, 2021). COVID-19 can cause symptoms such as fever, shortness of breath, cough, and fatigue, however, some individuals present no symptoms at all when infected with the disease. According to Shahid et al. (2020), elderly individuals, as well as people with comorbidities such as diabetes, cardiovascular diseases, chronic obstructive pulmonary disease (COPD), or hypertension, are at a higher risk for experiencing severe symptoms and death due to COVID-19. Children and adolescents, on the other hand, are less likely to suffer severe symptoms and therefore are less vulnerable to the

disease. It is important to note that as COVID-19 evolves and variants emerge, children are becoming more susceptible to showing symptoms and becoming ill as a result of the virus. The Center for Disease Control and Prevention (CDC) states that the best ways to protect individuals and those around them is to get vaccinated, wear a mask, stay six feet away from individuals who are sick, avoid crowded areas, wash hands frequently, cover sneezes and coughs, disinfect and clean surfaces, and monitor health daily (Center for Disease Control and Prevention, 2021b).

While children and adolescents are not at a high risk of becoming seriously ill from COVID-19, they are at risk for suffering other impacts as a result of growing up in a pandemic. It is likely that long-term effects on the mental health of children and adolescents will emerge due to the changes in homes, society, and the world due to COVID-19. Schooling has been moved to virtual modes, caregivers' jobs have been lost, and there are fewer in person interactions. The total effects of COVID-19 on children and adolescents may not be seen until longitudinal studies on the trauma of a pandemic as well as the long-term effects of symptoms of the coronavirus on children and adolescents are performed.

There have been limited studies and reviews on the impacts of COVID-19 on the mental health of children and adolescents, however, existing literature predicts that this pandemic has had, and will continue to have, significant impacts. Multiple studies have found significant impacts on youth's mental health throughout the pandemic. For example, as a result of isolation and confinement, children and adolescents are at a higher risk for experiencing depression and anxiety (Loades et al., 2020), and adolescents self-reported that they have had mental health challenges during the COVID-19 pandemic (Scott et al., 2021).

COVID-19 and its variants are still present in society today. Determining the long-term effects of the pandemic on children's development and well-being is important in determining

the best interventions and treatments for children growing up in a pandemic. As a result of potential sensitive and critical periods, a significant amount of social learning occurs during childhood and adolescence (Dahl et al., 2018). Thus, children and adolescents are vulnerable to the effects of the COVID-19 pandemic. Growing up in a pandemic may limit the experiences of children and adolescents such as interacting with non-familiar people, going to school with peers, and engaging in extracurricular activities which may then impact their ability to learn a skill after the sensitive period has passed. By reviewing current literature on the emotional and mental health impacts COVID-19 has had on children and adolescents, implications for interventions and further research will emerge.

The Current Study

The purpose of this literature review is to evaluate current research and literature discussing the impacts of COVID-19 on children's mental health as well as to provide implications for interventions and suggestions for future research related to children growing up in the COVID-19 pandemic. Providing appropriate support for children and adolescents in the face of lingering effects of the COVID-19 pandemic will become extremely important and relevant as societies begin to shift back towards pre-COVID routines. Gaining data on children's mental health outcomes is crucial to developing effective intervention and prevention methods to assist youth's long-term health and well-being while growing up in a pandemic.

The following research questions guide this review:

1. What negative impacts has the COVID-19 pandemic had on the mental health and well-being of children and adolescents?
2. What positive impacts has the COVID-19 pandemic had on the mental health and well-being of children and adolescents?

This thesis will discuss current research and literature on the impact of COVID-19 on children and adolescents' mental health and well-being by discussing socioemotional and mental health impacts in the context of Bronfenbrenner's ecological systems theory. Additionally, possible positive impacts will be discussed at the end of the literature review. Implications for interventions and future research will be discussed as well as relevant limitations.

Bronfenbrenner's Ecological Systems Theory

Urie Bronfenbrenner (1977) proposed an approach to human development research involving the altering environments in which the human organism lives and grows. Bronfenbrenner believed this approach was necessary due to the number of experiments completed in labs which felt artificial, unusual, and unfamiliar. Bronfenbrenner relied on naturalistic observations that were uncontaminated by the structured lab settings. His perspective expands upon and blends the naturalistic and experimental approaches and is referred to as the ecology of human development or the ecological systems theory (Bronfenbrenner 1977).

Bronfenbrenner explored the immediate environments in which human organisms live and grow, then he subdivided the individual's environment into four systems; the microsystem, mesosystem, exosystem, and macrosystem. In 1986, Bronfenbrenner added a last system to the theory called the chronosystem (Bronfenbrenner, 1986). The COVID-19 pandemic has affected all five systems within the ecological systems theory.

Microsystem

The microsystem incorporates the relationships between an individual and their immediate environment such as school, home, or workplace (Bronfenbrenner 1977). For a child, this may include their relationship with their family, peers, sports team, or religious group. Anything that the individual directly interacts with is included in the microsystem. When

considering a child in the midst of the COVID-19 pandemic at the center of the ecological systems theory, the child has most likely lost much in-person contact with those in their microsystem besides individuals with which they live. This includes a child's peers in school, friends at extracurricular activities, teachers, and other individuals that interact directly with the child. The lack of in-person interactions will likely have lasting effects on children's social skills and problem solving skills. Additionally, the lack of access to in-person school resources such as mental health professionals will likely impact youth's mental health and well-being throughout the pandemic.

Mesosystem

The mesosystem is composed of the relationships between the settings in one's microsystem (Bronfenbrenner 1977). For children, this may include the relationships between school and home or peer groups. Additionally, children's mesosystems have likely changed as schooling and other events moved online. As a result of school transitioning to virtual modes of instruction, parents are likely more involved with their child's schooling and education. There may be increased interaction between parents and schools or teachers. This may affect children and adolescents of different ages in different ways. For example, older adolescents who don't need as much supervision of school work may find the parent's increased interest in their education to be annoying and frustrating while younger children may need the increased attention to be productive.

Exosystem

The exosystem involves societal structures that do not immediately contain the developing individual but influence the person's immediate settings which in turn impacts the individual in some manner (Bronfenbrenner 1977). The exosystem includes societal structures

such as governments (national, state, and local) and world events as well as mass media, neighborhood events, and parents' employment. Many children's exosystems have changed as social distancing enforcements were put in place and parents began working from home or lost jobs. There have been significant economic consequences of job loss, and children and adolescents have experienced the impacts as families have struggled with limited or no income. This can lead to numerous struggles including housing and food insecurities. Additionally, if a caregiver loses their job, they are likely spending more time at home with their child. The increased time spent together could cause tension between parent and child, especially for older adolescents who require some level of independence to grow and develop. The presence of mass media has also increased the involvement of children and adolescents in politics which can increase tension in friendships and relationships. People have been more inclined to disagree when the topic of wearing masks or getting vaccinated arises, and individuals often feel very strongly in one way or the other. Children and adolescents who see this begin to model this behavior where, in previous decades, they may not have been concerned with politics.

Macrosystem

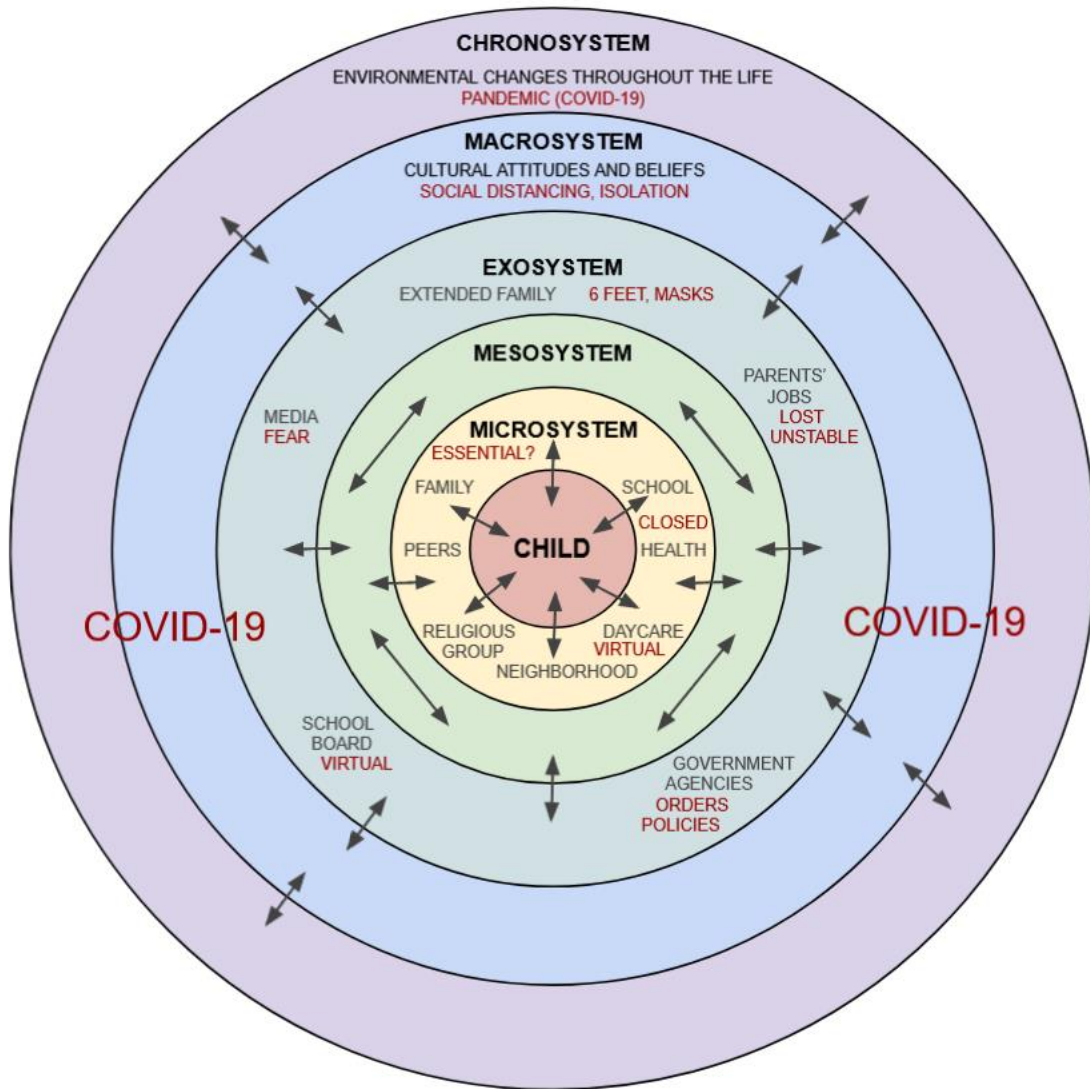
The macrosystem refers to larger institutional patterns of society including culture and subculture, economic and social systems, and educational and legal structures (Bronfenbrenner 1977). A child and their caregiver's place in the macrosystem largely impacts the way they are treated and how they interact with each other in varying contexts. Macrosystems have changed as social and educational systems evolve throughout the pandemic. Laws and mandates have been implemented restricting social contact, and schools closed down to in-person teaching which impacts youth's daily activities and the way they learn. Social isolation has increased, and

cultural changes have risen such as people supporting or opposing masks, school closures, vaccines, and other COVID-19 related mandates put into place.

Chronosystem

Lastly, the chronosystem includes the changes or consistency over time that individuals experience during development (Gauvain & Cole, 2005). This may include personal characteristic changes as well as environmental changes such as an economic depression or pandemics. The current chronosystem has changed dramatically over the past two years. The world is currently facing a global pandemic, and children and adolescents have certainly been impacted. The routines of everyday life have changed and evolved in unique ways as a result of the COVID-19 pandemic. Children have switched to online schooling, not participating in extracurricular activities, and had fewer opportunities to interact with peers and develop social skills. Additionally, children have been more involved with politics over the past two years as opinions regarding mask mandates, vaccines, and other COVID-19 related safety measures have become political. Many of these impacts may not be seen until longitudinal studies involving data from after the pandemic can be performed.

Figure 1: Bronfenbrenner's Ecological Systems Theory in the COVID-19 Era



METHODS

Search Strategy and Data Sources

A comprehensive literature review was conducted using multiple search engines and search terms to address the aim of this review. Google Scholar as well as the University of North Carolina at Chapel Hill libraries online search engines including Articles+, Articles+ Catalog, and E-Journals were used with the search terms addressed below. Additionally, the UNC libraries online search engine has a suggestion feature, where articles related to the one being viewed were suggested, and some articles were found through this method. Articles were also found by reference mining, looking at the references of articles found using the two search engines mentioned above. The key words “(COVID-19 OR COVID) AND (Children OR Adolescents) AND (‘Mental Health’ OR ‘Nonsuicidal Self Injury’ OR Suicide OR Depression OR Anxiety OR ‘Child Maltreatment’ OR ‘Child Abuse’ OR ‘Psychological Impact’)” were used in the comprehensive literature search. In order to find themes, the articles were structured in a chart and grouped by topics. If an article discussed multiple topics, it was placed into both groups on the chart.

Inclusion and Exclusion Criteria

Inclusion Criteria

For research to be included in this review, all articles must meet the following inclusion criteria:

- a. Contain information related to children and/or adolescents (aged 0-25)
- b. Full articles written in English

- c. Published between December 2019 and December 2021
- d. Articles discuss the impacts of COVID-19 or results of COVID-19 on mental health or well-being of children and/or adolescents
- e. Research conducted nationally or internationally

Exclusion Criteria

Articles were excluded if they did not meet the above inclusion criteria or if they met any of the exclusion criteria listed below

- a. Did not discuss the impacts of COVID-19 on mental health and well-being
- b. Contained information on individuals who aren't children or adolescents (older than 25 years)
- c. Articles published after December 2021

After applying this inclusion and exclusion criteria, 127 abstracts were read. From reading the abstracts and continuing to apply the inclusion and exclusion criteria, 81 articles remained. Those 81 full-length articles were read, and 52 more articles were excluded due to relevance to the aim of this review. 29 total articles were then included in this review. The remaining articles were grouped together by topic and then themes were created and reviewed. Themes were created by noting recurring topics related to children and adolescents' mental health when reviewing the literature. Five total themes were created in this review. Four themes discussing the negative outcomes and one final theme discussing the positive outcomes. For a full list of themes and articles within each theme, see Appendix A.

Literature Review

This review aims to identify negative and positive effects of the COVID-19 pandemic on the mental health and well-being of children and adolescents. The mental health of children and adolescents has been a growing concern even prior to the COVID-19 pandemic (Listernick & Badawy, 2021). Researchers and practitioners have expressed increased concerns for mental health illness in children and adolescents due to the effects of the COVID-19 pandemic (de Figueiredo et al., 2021; Hasking et al., 2021; Hill et al., 2021; Lawson et al., 2020; S. J. Lee et al., 2020; Listernick & Badawy, 2021; Moutier, 2021; Plener, 2021; Reger et al., 2020). Moutier (2021) identifies potential effects of the COVID-19 pandemic which could lead to a decline in mental health as:

Social disconnectedness, loneliness, or diminished social support; fears about or realized job or financial losses; remote work or school and the related disruption in social, academic, and basic structure to daily life; loss of loved ones or anticipated milestones; increased alcohol consumption in some regions of the world; and increased availability of lethal means such as firearms, opioids, and other toxic substances (Moutier, 2021, Specific COVID-19 Threats to Population Suicide Risk section)

The effects school closures have had on the mental health of children and adolescents has been one of the largest impacts on mental health due to the importance of peer interactions, routines, and adult mentors or supervisors for this age group. The social isolation that COVID-19 imposed on everyone will continue to affect the rates of mental health disorders and symptoms in people

of all ages. Children and adolescents are at a vulnerable stage due to the critical periods of development they are experiencing (Miranda, 2020). Critical periods are times throughout the lifespan where critical developmental milestones take place, and numerous critical periods take place early in life. Exploring the effects of the COVID-19 pandemic on the mental health and well-being of children and adolescents is extremely important in order to provide appropriate treatment interventions and prevention strategies for this already vulnerable population (Listernick & Badawy, 2021).

Child Maltreatment and Abuse

There are numerous negative long-term outcomes to childhood maltreatment and abuse. Childhood maltreatment can take many forms such as physical abuse, neglect, emotional abuse, sexual abuse, and many other forms of maltreatment. The risk of developmental psychopathology and emotional dysregulation throughout the lifespan are significantly higher for individuals who experience childhood maltreatment (Cuartas, 2020). Additionally, early exposure to violence is a predictive factor of negative developmental and mental health outcomes (Cuartas, 2020). One study involving parents' self-reports, found that parents reported an increase of conflict, discipline, and yelling or screaming with their children during the COVID-19 pandemic (Rodriguez et al., 2021). Exploring these changes in child maltreatment throughout the COVID-19 pandemic is important for future policies related to child development, protection, and mental health to be put into practice in the best ways possible.

Social Isolation

The COVID-19 pandemic has increased the prevalence and risk of child maltreatment and abuse. Caregivers have become increasingly stressed and overloaded as a result of the pandemic. The inability to cope with this added stress may provoke aggressive and negative

responses towards children and compromise parents' ability to properly care for their children (Curatas, 2020). One study of adults living in the U.S. concluded that parents' perceived challenges in parenting as a result of social isolation due to COVID-19 was significantly related to risk for child maltreatment (S. J. Lee et al., 2020). This study found that the perceived social isolation was related to risk of emotional, physical, and verbal neglect and aggression towards children. Shawna Lee et al. (2020) found that parents' self-report of hitting or spanking their child has increased by 124% since the start of the COVID-19 pandemic. They also reported an increase in the risk for physical punishment of children whose parents spent more time with them as a result of job loss or social distancing (S. J. Lee et al., 2020). These results are congruent with other articles stating that the rate of domestic violence and child maltreatment have increased due to social isolation (de Figueiredo et al., 2021).

de Figueiredo et al. (2021) discuss the impacts of elevated parenthood stress and insecurities on the levels of child maltreatment. They discussed the increased responsibilities and challenges that caregivers of children and adolescents are facing due to quarantine and isolation orders. The inability of caregivers to cope with and manage the additional stress may cause an increase in child maltreatment throughout the COVID-19 pandemic. Adverse Childhood Experiences (ACEs) are traumatic experiences that occur in one's childhood, and they have the power to impact future mental and physical health, substance use, education, job opportunities, as well as earning potential (Center for Disease Control and Prevention, 2021a). Experiencing childhood maltreatment or abuse is considered an ACE and can have long-term impacts on one's health, brain development, and behavioral disturbances. Additionally, childhood trauma, such as maltreatment and abuse, can increase the risk of mental health disorders later in life. Providing

appropriate and effective education, intervention, and prevention strategies is pertinent to protecting this young population (de Figueiredo et al., 2021).

Caregiver Job Loss

A significant risk factor for child maltreatment is caregiver job loss during the COVID-19 pandemic (Lawson et al., 2020). Even prior to COVID-19, a significant risk factor for child maltreatment was parental unemployment (Rodriguez et al., 2021). In a study consisting of parents in the U.S., parental job loss was a significant predictor of physical and psychological maltreatment of children during the COVID-19 pandemic (Lawson et al., 2020). Parents who lost their jobs during COVID-19 were 4.86 times more likely to psychologically maltreat their children compared to parents who did not lose their jobs (Lawson et al., 2020). Psychological maltreatment was defined in this article as belittling, verbally threatening harm to children, and ridiculing children (Lawson et al., 2020). Another study in the U.S. involving parents sought to identify stressors related to the COVID-19 pandemic which were related to the risk for child maltreatment, and they had similar findings. This study found unemployed parents in the U.S. to be twice as likely to physically abuse their children and four times more likely to neglect their children. The authors stated that financial concerns related to a job loss can add stress to caregivers which increases the risk for child maltreatment (Rodriguez et al., 2021). There is a significant risk for long-term effects on children as a result of increased rates of child maltreatment resulting from parental job loss during the COVID-19 pandemic (Lawson et al., 2020). Once a child has been psychologically maltreated, the child is more likely to be aggressive, anxious, depressed, or hyperactive, and the child is at an increased risk for conduct problems throughout their life, so addressing this risk is essential (Lawson et al., 2020).

School Closures

Typically, schools and education personnel report the highest percentage of child maltreatment cases (S. J. Lee et al., 2020), and due to school closures during the COVID-19 pandemic, child maltreatment may go unnoticed more frequently. With children staying at home during the COVID-19 pandemic, fewer mandated reporters such as teachers, nurses, and mental health providers are in direct contact with children and adolescents, and therefore they are unable to report concerns to child protective services (Rodriguez et al., 2021). As a result, it is likely that the number of reports is less than the actual occurrence of child maltreatment and abuse.

Many families also relied on schools to provide meals for their children, and due to school closures during the COVID-19 pandemic, numerous families are experiencing challenges to feed their children. Caregivers who struggled to provide food for their children reported increased conflict with their children (Rodriguez et al., 2021). This elevated conflict can lead to increased caregiver stress, and the inability to cope with this added stress may result in higher rates of child maltreatment (Rodriguez et al., 2021). Many of the risk factors discussed above relate back to increased caregiver contact with children and elevated levels of stress. The caregivers' decreased ability to cope with and manage this increased stress is a contributing factor to an increased risk for child maltreatment; not the increased stress itself.

Nonsuicidal Self-Injury (NSSI)

Nonsuicidal self-injury (NSSI) is the “deliberate and direct engagement in behaviors that cause direct tissue damage without conscious suicidal intent” (Hasking et al., 2020). Some common examples of NSSI include cutting, burning, hitting, picking, pulling, and scratching. Relief from overwhelming emotional states or changing an emotional state is usually the goal of NSSI (Hasking et al., 2020; Plener, 2021). Samples of adolescents have found that NSSI rates

have consistently been around 17% (Zetterqvist et al., 2021). While there is a lack of data on the effects the COVID-19 pandemic has had on NSSI in children and adolescents, the risk for increased rates of NSSI is a concern (Hasking et al., 2021; Plener, 2021). Common risk factors for NSSI include hopelessness and a previous history of NSSI, and the implications of the COVID-19 pandemic on children have led to questions and concerns about the rates of NSSI during the COVID-19 pandemic (Plener, 2021).

Risk Factors

There is potential for increased family conflict due to extended time spent at home as a result of quarantining, and this may result in increased needs to regulate emotions in children and adolescents (Plener, 2021). The increased need to regulate emotions could lead to an increase in NSSI in children and adolescents. Additionally, protective factors against NSSI include social support, which has mostly been online during the pandemic, and access to mental health services, which has been limited due to social distancing (Plener, 2021). Plener (2021) recognizes that the pandemic has created an atmosphere with an increase of potential risk factors and a decrease in protective factors, and the combination of the two will likely increase the rates of NSSI in children and adolescents during the COVID-19 pandemic. The frequency of some risk factors, such as school stressors, bullying, and the influence of peers who engage in NSSI may have lessened due to school closures and social restrictions, yet social media and online sources still make bullying possible. Social media and online sources also provide a platform for contacting groups or individuals who encourage and engage in NSSI (Plener, 2021).

COVID-19 Pandemic Impact on Rates of NSSI

An international cohort study involving child and adolescent NSSI presentations found that overall there was a 7% increase in child and adolescent NSSI presentations from 2019 to

2020 (Ougrin et al., 2021). This study also found that there was no significant difference in the presentation of severe NSSI. Ougrin et al. (2021) reported fewer hospital presentations of child or adolescent NSSI overall in areas included in their study, but the proportion of children and adolescents presenting with self-harm versus other problems increased. Additionally, admissions to an observation ward were less likely for children and adolescents presenting with self-harm in 2020 due to a reluctance to keep patients in the hospital longer than necessary (Ougrin et al., 2021). As a result, researchers predict that young people suffering from severe psychiatric disorders are not receiving the treatment necessary during the lockdown (Ougrin et al., 2021). This is likely due to individuals staying home to avoid possible COVID-19 contact in a hospital.

One study involving Swedish high schoolers in 2011, 2014, and 2020-2021 found the prevalence of NSSI in 2011 and 2014 was around 17% both years, however, the sample from 2020-2021 showed a prevalence of 27.6% (Zetterqvist et al., 2021). Zetterqvist et al. (2021) also found an increase in the prevalence of NSSI from the spring of 2020 to the spring of 2021 (24.4% and 30.6%, respectively). The researchers cite that high schoolers in Sweden were facing school closures as a result of the COVID-19 pandemic, and they noted that concerns relating to social isolation and mental health had been previously raised. Zetterqvist et al. (2021) acknowledged that future research is needed to confirm their initial results and to determine other psychosocial effects of the COVID-19 pandemic on adolescents. Nonetheless, these initial findings suggest an increase in NSSI rates in children and adolescents may be due to the effects of the COVID-19 pandemic.

School Closures

Schools play a large role in responding to NSSI due to the fact that early to mid-adolescence is when NSSI usually begins (Hasking et al., 2020). School closures have negatively

impacted school aged children at risk for NSSI and other mental health illnesses through the decrease in access to care and support offered in schools (Hasking et al., 2020). The closure of schools has added to the social isolation that the COVID-19 pandemic brought upon the world, and social isolation is associated with increased risk for NSSI (Listernick & Badawy, 2021). Schools play an important role in identifying and responding to NSSI in youth, so there is no surprise that school closures due to the COVID-19 pandemic have impacted the reported prevalence of NSSI in school aged children (Hasking et al., 2021). In addition to limiting the mental health resources which children and adolescents can usually access, school closures have disrupted routines, structure, and peer interactions that are protective factors against NSSI (Hasking et al., 2021). The loss of in-person school support for youth engaging in or at risk of NSSI is an additional challenge to providing effective and appropriate mental health services for school aged children (Hasking et al., 2021).

Protective Factors

While there are many negative impacts to school closures and isolation, the increased time spent at home with family could strengthen family relationships which is a protective factor against engaging in NSSI (Hasking et al., 2020). Additionally, more time away from school may decrease instances of bullying, which is a significant risk factor for NSSI, and school aged children may feel less pressure to fit in with their peers (Hasking et al., 2020). While these may be protective factors initially, students benefiting from staying home may need extra monitoring during the transition back to face-to-face learning (Hasking et al., 2020).

Relationship to suicide

While NSSI includes behaviors that explicitly exclude suicidal intent, there is a link between NSSI and suicidal ideation and behaviors (Hasking et al., 2020). After engaging in

NSSI, individuals are four time more likely to attempt suicide, and among adolescents, transitioning from suicidal ideation to suicide attempts can be predicted by engaging in NSSI (Hasking et al., 2020).

Suicide

There is limited data on the impacts of the COVID-19 pandemic on instances of suicide in children and adolescents due to the sensitivity of the topic, the vulnerability of the population, and other confounding variables which contribute to suicidal behavior and thoughts. A study in England analyzed data on child suicide rates during the COVID-19 pandemic, and the researchers found one additional instance of suicide in the child and adolescent population from the 2020 data set compared to the 2019 dataset. While no definitive conclusions were drawn from this data, the researchers stated that they saw an indication of an increase in child suicide deaths since the beginning of lockdown, and further research on this topic is needed to reach conclusions (Odd et al., 2020). Various effects, such as continued school closures, were not captured in this study. These indications along with the increased risk factors for suicidal behavior and ideation brought upon by the side effects of the COVID-19 pandemic indicate that effective intervention and prevention strategies are essential.

Risk Factors

Reger et al. (2020) identifies potential risk factors for suicidal behaviors that resulted from the COVID-19 pandemic. The consequences of social distancing such as social isolation, decreased access to community support groups, and barriers to mental health treatment all have impacts on suicide rates. The social connectedness provided by social interaction is a large protective factor for suicide, but due to social distancing, individuals have greatly missed out on opportunities for social interaction. Secondly, weekly attendance to in-person community events

such as religious gatherings is associated with decreased suicide rates due to the increased sense of community (Reger et al., 2020). Due to social distancing, religious gatherings have been restricted, and individuals may have lost their sense of community that religion provided. Lastly, mental health treatment has been increasingly difficult to access due to social distancing and restrictions on in-person appointments. Survivors of suicide attempts or individuals with suicidal ideation are likely to be negatively affected by the reduced access to mental health treatment. Reger et al. (2020) also identified prevention opportunities such as tele-mental health and prioritizing physical distance rather than social distance. Tele-mental health is a great option to receive mental health treatment, however, telehealth for suicide prevention is not as advanced and effective as telehealth for other mental health illnesses. Most research and resources focuses on telehealth treatments for other mental health issues such as depression and anxiety. Additionally, emphasizing physical distance not social distance can help maintain social support which is a large protective factor for suicide (Reger et al., 2020). Staying physically distant will help prevent the spread of COVID-19, while social distance is not necessary. There are numerous ways to stay socially connected such as social media, video calls, and outdoor gatherings where a safe physical distance can be maintained.

School Closures

School closures have had a significant impact on the mental health of children and adolescents throughout the COVID-19 pandemic. These closures will likely reduce access to mental health resources for children and adolescents (J. Lee, 2020). Additionally, the structure and routine school provide can act as a coping mechanism for individuals with mental health issues, and when schools are closed, students lose this coping mechanism (J. Lee, 2020). This lack of routine and social support may cause an increase in mental health disorders including

suicidal ideation or behavior. While school closures may be a risk factor for increased suicidal ideations and behaviors during the COVID-19 pandemic, no one factor is the cause for suicide ideation and attempts. Additionally, blaming the effects of the pandemic for all suicides that occur during the COVID-19 pandemic is not accurate due to the numerous confounding factors (Critchfield, 2021).

Correlation between COVID-19 Restrictions and Suicide-Related Behavior

A study looking at routine suicide-risk screenings in a pediatric emergency department (ED) in Texas evaluated reports during the COVID-19 pandemic in 2020 compared to 2019 in pediatric patients aged 11-21 (Hill et al., 2021). The rates of suicide-related behaviors presenting in the pediatric ED fluctuated throughout the COVID-19 pandemic. An early increase was seen between February and April 2020, and Hill et al. (2021) suspect that this could be due to the initial onset of the pandemic, stay-at-home mandates, and attempts to social distance. In May 2020, Texas lifted some COVID-19 restrictions, and this correlated with a decrease in suicide-related behaviors presenting in the pediatric ED. This may be due to increased socialization, returning to routines, or reduced social isolation. In July 2020, Texas experienced a spike in COVID-19 cases, stricter restrictions, and an increase in the rates of positive screens for suicide-related behaviors in the pediatric ED. Hill et al. (2021) suggest that there may be an association between the effects of the COVID-19 pandemic with rates of suicide-related behavior in children and adolescents.

The Center for Disease Control (CDC) also examined data on emergency department (ED) visits for suspected suicide attempts in adolescents during and before the COVID-19 pandemic (Yard et al., 2021). Yard et al. (2021) found fewer ED visits for suicide attempts in this population during the onset of the COVID-19 pandemic in the U.S compared to the same

time period in 2019. By May 2020, there was an increase in adolescent presentations of suspected suicide attempts in 12-17 year-olds (Yard et al., 2021). This corresponds to an increase in positive COVID-19 cases in the U.S. and may indicate a link between the effects of COVID-19 and suspected suicide attempts among adolescents.

Need for Suicide Prevention and Intervention Strategies in the COVID-19 Era

Globally, suicide is the second leading cause of death in young people (Asarnow & Chung, 2021), and many researchers and practitioners have concerns that suicide rates will increase due to effects related to the COVID-19 pandemic (Hill et al., 2021; Moutier, 2021; Reger et al., 2020). Preliminary data show no evidence that suicide rates among children and adolescents have significantly increased during the COVID-19 era compared to previous years (Asarnow & Chung, 2021; Moutier, 2021; Rossen et al., 2021). While there is no overwhelming proof of an increase in suicide among children and adolescents, data indicates an increase in suicidal ideation and behavior as well as mental health related emergency department (ED) visits (Asarnow & Chung, 2021), and providing appropriate prevention strategies and interventions remains pertinent.

Depression and Anxiety

Mental health illnesses are not uncommon in the United States. In those 18 years and younger, estimated rates of anxiety are between 5.7% and 12.8%. Estimated rates of depression vary from 1-2% in pre-pubertal children and then rise to 4-5% after puberty. These estimated rates continue to increase up to 17% in early adulthood (Listernick & Badawy, 2021). Listernick & Badawy (2021) also point out that existing literature shows an association between social isolation and increased rates of depressive symptoms. Therefore, the side effects of COVID-19,

such as social isolation, will likely cause an increase in depression and anxiety in children and adolescents.

Depression and Anxiety in the COVID-19 Era

While there is limited data on the links between the COVID-19 pandemic and depression and anxiety in children and adolescents, numerous studies suggest that the rates of depression and anxiety have significantly increased throughout the pandemic compared to data from pre-pandemic years (Pieh et al., 2021; Zetterqvist et al., 2021; Zhang et al., 2020). Children and adolescents are also predicted to experience increased anxiety towards school and their future as well as delays in future milestones, such as graduations, sports or academic competitions, and standardized testing required for colleges, as a result of the COVID-19 pandemic (Gupta & Jawanda, 2020).

One study involving an online survey in Austria in February 2021 determined that well-being and life satisfaction in adolescents were significantly lower in 2021 compared to 2018 (Pieh et al., 2021). Pieh et al. (2021) also found a significant increase in anxiety and depressive symptoms during the pandemic compared to before and in the beginning of the COVID-19 pandemic. The results of this study imply an increase of mental health disorders throughout the COVID-19 pandemic and highlight the need for mental health prevention and intervention programs for youth (Pieh et al., 2021).

Protective and Risk Factors

Adolescents are more vulnerable to the negative effects of stress than adults due to the critical periods of development they experience, so they have faced more psychological impacts throughout the COVID-19 pandemic (Zhang et al., 2020). Zhang et al. (2020) conducted a study involving an online survey investigating the psychological consequences of the COVID-19

pandemic on junior high and high school students in China. The researchers identified protective and risk factors for depression, anxiety, and stress in junior high and high school students. Zhang et al. (2020) determined that resilience and positive coping skills were protective factors for depression, anxiety, and stress, and they also determined that negative coping is a risk factor for mental health. The researchers stated that quarantine restrictions, reduced social interaction, changes to daily routines, fear of becoming sick, and boredom can have negative psychological effects on adolescents and teenagers (Zhang et al., 2020). Compared to recent studies not involving an epidemic or pandemic, Zhang et al. (2020) found higher rates of depression and anxiety in junior high and high school students, specifically, they found that the mental health of one fifth of this population had been affected by COVID-19 and its side effects (Zhang et al., 2020). Additionally, individuals with pre-existing conditions of depression or anxiety are at a greater risk for experiencing more intense and worse symptoms as a result of the effects of the COVID-19 pandemic (The Wall Street Journal, 2021).

Lifestyle Transformation Effects

A study performed by Chen et al. (2020) discussed the psychological impacts of COVID-19 on adolescents stating that lifestyle transformations, such as being home alone during the week, not seeing friends as frequently, and not going to school in-person, as well as the fear of getting sick may cause anxious and depressive disorders in this already vulnerable population (Chen et al., 2020). In order to fill gaps in literature and research, Chen et al. (2020) identified factors impacting depression and anxiety in adolescents during the COVID-19 pandemic. The researchers stated that when adolescents were alone throughout weekdays, they were more likely to be anxious and depressed during COVID-19, and Chen et al. (2020) found that physical activity reduced the risk for depression and anxiety in adolescents throughout this pandemic.

Chen et al. (2020) conclude by calling for attention to the potential mental health crisis adolescents may face as a result of the COVID-19 pandemic, and the researchers emphasize the importance of prevention and early identification over treatment.

Positive Outcomes

Increased Time Spent with Family

There are various negative impacts on the mental health of children and adolescents as a result of the COVID-19 pandemic, however, there is also room for positive outcomes. One study examining parent interactions with children aged twelve and younger throughout the COVID-19 pandemic found that parents were more engaged with their children during direct child caregiving activities such as reading and playing (S. J. Lee et al., 2020). This engagement will likely promote typical development and provide parents with an opportunity to notice symptoms of mental health disorders in their children, should they arise. The additional time spent at home and with family can also promote the development of relationships between family members, and children may develop more empathy and humility. The extra family time allowed individuals to create new family traditions and reevaluate the values and needs of their family as well (Perry, 2021).

Virtual Mental Health Treatment

A significant barrier to providing and receiving mental health treatment during the COVID-19 pandemic is trying to slow the spread of COVID-19 by reducing in-person interactions. One solution to this barrier is telehealth. Numerous providers have worked to provide virtual therapy and treatment options. In addition, insurance companies have continued to reimburse telehealth appointments making treatment more accessible. With providers and insurance companies working together, individuals are able to receive mental health care

virtually (Perry, 2021). The increased focus on mental health throughout the COVID-19 pandemic has helped destigmatize mental health as a whole (Perry, 2021).

Teletherapy is among one form of telehealth that has become more important throughout the COVID-19 pandemic (Di Carlo et al., 2020). Di Carlo et al. (2020) identified advantages to teletherapy including improved access to care, reduced appointment waiting time, and decreased travel costs and time. These advantages are relevant in the COVID-19 era due to social distancing. Additionally, teletherapy provides the opportunity for individuals to receive care in their native language more readily than in-person care. One concern around teletherapy is the loss in personal contact between patient and provider. This can inhibit rapport building, and providers may be unable to see nonverbal cues during an appointment. Teletherapy has become an acceptable form of treatment for psychiatric disorders, and during the COVID-19 pandemic, this form of therapy is important in continuing to provide treatment (Di Carlo et al., 2020). O'Brian and McNicholas (2020) also identify the importance of teletherapy during the COVID-19 pandemic to reduce disruption to patient care. Telemedicine provides opportunity for care in an appropriate manner during the pandemic, and it increases accessibility. Teletherapy is an appropriate solution to the problems the COVID-19 pandemic has posed for in person care, however, teletherapy use and relevance existed prior to the COVID-19 pandemic and will continue after it as well (O'Brian & McNicholas, 2020). The increased use of teletherapy throughout the COVID-19 pandemic will likely smooth out any problems providers had with telehealth services, and this will increase the usability of this service.

School Closures

While some youth experienced the adverse effects of school closures, other youth with neurodifferences related positively to this change which included increased time spent with

family at home, a new individualized schooling routine, or an interruption in daily stressors such as bullying at school (Asarnow & Chung, 2021). The increased time spent at home with family could strengthen family relationships which is a protective factor against engaging in NSSI (Hasking et al., 2020). Additionally, more time away from school may decrease instances of bullying, which is a large risk factor for NSSI, and school aged children may feel less pressure to fit in with their peers (Hasking et al., 2020). While these may be protective factors initially, students benefiting from staying home may need extra monitoring during the transition back to face-to-face learning (Hasking et al., 2020).

As a result of COVID-19 and social-distancing, schooling moved to virtual modes and there was an increase in digital teaching aids. Children who are able to access these digital teaching aids will be exposed to a larger variety of teaching and learning methods, and as a result they will learn how to be flexible and how to work in various settings. These are both skills which will benefit them later in life (Gupta & Jawanda, 2020).

Development and Resilience

With ample amounts of unstructured time at home, children and adolescents began to develop new hobbies and learn things about themselves that were previously unknown. By learning how to fill their unstructured time with creative and personalized tasks, children and adolescents developed problem solving skills and a protective factor against mental health disorders such as anxiety and depression (Perry, 2021). Children and adolescents have been faced with numerous stressors resulting from the COVID-19 pandemic. These stressful situations provided opportunities for youth to learn and develop stress-management and coping skills. By developing these skills at a young age, children and adolescents are learning how to manage and react to their feelings, and they are gaining resilience (Perry, 2021). Children have also learned

time management skills as a result of virtual learning and spending more time at home (Sabo, 2021).

The situations families are facing due to the COVID-19 pandemic are very real, and have threatened basic needs. These challenges have also provided opportunities for caregivers and youth to develop more resilience. Family resilience has increased through finding flexibility in reactions to changes and increased time spent with family members. Building resilience will help children and adolescents face stressors in the future as well as the present (Sabo, 2021).

Many children and adolescents have grown up in a world where they have always used technology in their daily lives. This familiarity with technology along with the prevalence of social media may attenuate some of the negative effects that the COVID-19 pandemic has caused on mental health and may promote resilience (Hasking et al., 2021). The internet allows individuals to differentiate between “physical distancing” and “social distancing” and youth are able to stay connected, virtually, to their peers (Hasking et al., 2021).

A survey including 3,000 parents and caregivers of children under the age of 18 in the U.S. found that while families reported experiencing stress during the COVID-19 pandemic, a significant number of stressed parents and caregivers also reported positive experiences throughout the COVID-19 pandemic, and 60% of families reported growing closer. Some of these reported positive experiences include spending more time together, developing stress management skills, and strengthening their relationships. These positive childhood experiences can also act as a protective factor against toxic stress (Tufts Medical Center, 2021).

Children and adolescents are becoming more involved in work around their homes as well, and this may increase their sense of responsibility and self-esteem. This increase in responsibility and self-esteem improves a child’s confidence, and, as a result, they are able to

become more independent (Sabo, 2021). Children are also likely to spend more time outdoors as a result of the COVID-19 pandemic, and this provides opportunities for youth to learn about and appreciate nature which can be a protective factor against mental health disorders (Gupta & Jawanda, 2020).

Discussion

Results

The aim of this thesis is to add to the conversation about the effects that the COVID-19 pandemic has had on the mental health and well-being of children and adolescents. It is hoped that this review will help emphasize the necessity of effective intervention and prevention strategies to combat the negative impacts that the pandemic has had on this population. The following research questions guided this literature review:

3. What negative impacts has the COVID-19 pandemic had on the mental health and well-being of children and adolescents?
4. What positive impacts has the COVID-19 pandemic had on the mental health and well-being of children and adolescents?

After reviewing the 29 included articles, four themes emerged in the literature to address the negative impacts of the COVID-19 pandemic on the mental health and well-being of children and adolescents: child maltreatment, nonsuicidal self-injury (NSSI), suicide, and anxiety and depression. The positive impacts of the COVID-19 pandemic were combined into one additional theme to address the second research question guiding this review. Lastly, these themes all relate back to Bronfenbrenner's ecological theory of development as there are many factors in life that influence the mental health and well-being of youth. Some of these factors include school systems, caregivers' employment status, and healthcare services, and the quality of these factors impacts resilience and coping skills in children and adolescents.

The results of this literature review show that there is great concern for a potential mental health crisis among children and adolescents as a result of the COVID-19 pandemic and its side effects. Knowing that the rates of various mental health issues and risk factors have increased as a result of the COVID-19 pandemic, effective and practical interventions need to be implemented immediately to offset the negative effects. Additionally, interventions need to be adapted to the COVID-19 era that the world is continuing to experience.

Child Maltreatment Results Summary

Current literature shows that the occurrence of child maltreatment has increased since the onset of the COVID-19 pandemic. Numerous risk factors for child maltreatment have increased throughout the pandemic, and caregivers' inability to manage these extra stressors can result in child maltreatment. Some of these risk factors include increased caregiver stress as well as the closure of schools which results in fewer in-person interactions between mandated reporters and youth. There are numerous long-term consequences of experiencing maltreatment in one's childhood including a greater risk for behavioral problems, aggression, and mental health disorders such as anxiety and depression. The life-long impacts that child maltreatment can have on an individual demonstrates that proper intervention and prevention strategies are currently needed to offset the increase in risk factors seen throughout the COVID-19 pandemic.

NSSI Results Summary

The literature suggests that risk factors for NSSI have increased as a result of the COVID-19 pandemic. Children and adolescents are facing increased stress and an increased need to regulate emotions which may result in NSSI behaviors. Additionally, the protective factor of social support has decreased as a result of social distancing throughout the pandemic. The combination of an increase in risk factors and a decrease in protective factors results in

considerable concern for increased rates of NSSI in children and adolescents. Appropriate prevention and intervention strategies need to be put in place to address the concern for increased rates of NSSI in children and adolescents.

Suicide Results Summary

While numerous studies indicated concern for an increase in the rate of suicides among young people, the current data did not support these concerns. This result was unexpected as we have seen an increase in occurrences of other mental health disorders such as depression and anxiety. One theory for why the reported rate of suicides did not increase is that after being exposed to such a deadly disease, individuals began to value their own lives more than before the COVID-19 pandemic. Therefore, individuals were less likely to experience suicidal ideations or behaviors. Additionally, while individuals may have continued to experience negative thoughts and feelings, which may normally lead to suicidal ideation or behaviors, there was a sense of community in those negative feelings as everyone on the planet was going through similar challenges. The realization that everyone is going through the same challenge can help those who are struggling feel that they are not alone. The increased risk factors are still present, and proper intervention and prevention strategies are essential.

Depression and Anxiety Results Summary

Unsurprisingly, rates of depression and anxiety appear to have increased as the COVID-19 pandemic has progressed. Individuals' ability to cope with the impacts that COVID-19 and social distancing have had on their lives is a large factor in determining the impact on one's mental health. If an individual is more resilient and knows how to cope with adversity, they are less likely to feel large impacts from the pandemic. Individuals who lack proper resources and support will likely be greatly impacted by the COVID-19 pandemic and the effects of social

distancing on mental health. The increase in risk factors for anxiety and depression also amplifies the concern for a mental health crisis among youth as a result of the COVID-19 pandemic, so effective intervention and prevention strategies are needed.

Positive Outcomes Results Summary

After reviewing the literature, there may appear to be more negative outcomes than positive outcomes as a result of the COVID-19 pandemic, however, a significant number of positive outcomes have been reported as well. Some of these positive outcomes include increased time spent with family, development of resilience, and the progression of virtual mental health services. Additionally, some situations may negatively impact certain individuals, while those who are more internally resilient and have developed coping skills may not experience the negative impacts of the same situation. An individuals' personal characteristics can significantly impact their reaction to a situation, so providing sufficient education, support, and therapeutic services is imperative.

Future Directions and Implications

The long-term impacts of the COVID-19 pandemic may remain unclear for some time, and some impacts may not even show themselves for numerous years. The potential for long-term positive effects is unknown. Additionally, residual effects of the pandemic may be re-triggered by future traumatic events which may cause further negative effects to emerge. The current literature shows great concern for a mental health crisis among youth as a result of the side effects of the COVID-19 pandemic. Identifying potential long-term effects of the COVID-19 pandemic can help professionals develop efficient and effective intervention and prevention methods.

Virtual Therapy and COVID-19 Era Needs

There is a need for therapy services to improve and perfect their virtual options. It is essential to modify current, effective mental health treatments and prevention strategies to be compatible with the COVID-19 era and to utilize appropriate delivery methods. In-person treatment is less accessible due to social distancing measures, so mental health care must evolve with the current challenges to ensure patients receive the care they depend on. The COVID-19 pandemic has been present for over two years, so investing in telehealth services that are accessible and effective is important. Additionally, the increase of telehealth usage has expanded the population attending therapy. Telehealth creates opportunities for individuals to attend therapy who previously would have needed to find transportation or drive numerous hours to an in-person appointment. Due to the increased popularity of telehealth services, more research is needed to determine which telehealth strategies are the most effective for different clientele. Additionally, telehealth should remain an option for individuals who prefer that form of care due to barriers such as transportation, communication, or time restraints even after the COVID-19 pandemic is over. Overall, research, policy change, funding, training, and equity are all needed to change and improve the current in-person mental health services as well as telehealth services.

Need for Youth Perspective Studies

There is a need for research using self-reports from youth directly. Youth perspective studies are uncommon due to the need for guardian consent, assent, ethical issues, as well as challenges with receiving approval from the Institutional Review Board (IRB). Due to these challenges, most available research discussing the mental health and well-being of children and adolescents consists of caregivers' reports of what they think their child is feeling or how their child is acting. However, by using responses produced by youth themselves in addition to

caregivers' responses, intervention and prevention strategies can become better suited for the target population. Youth involvement may encourage child and adolescent participation in treatment strategies as well, which may improve outcomes.

Need for Longitudinal Studies

Longitudinal studies are also needed to determine the long-term effects that the COVID-19 pandemic has had on the mental health and well-being of children and adolescents. Much of the available research involves cross-sectional data, and drawing conclusions about future risk is difficult if not impossible in that situation. Longitudinal studies will help to determine the long-term effects that the pandemic has had on this population, and this will help practitioners, teachers, and other professionals develop proper intervention and prevention strategies.

Suicide Specific Future Directions

The literature shows an increase in risk factors for suicide in youth, however, the data has not shown an increase in suicide rates in children and adolescents. While this is a positive outcome currently, the risk still exists, and professionals predict there may be a lag in the increase in suicides resulting from the COVID-19 pandemic due to the long-term effects the pandemic will have. Providing effective prevention and intervention strategies to this vulnerable population is essential to prevent the predicted increase in suicidal ideations and behaviors. While the literature specifically discusses the potential for this lag in relation to suicide rates, the long-term effects of the COVID-19 pandemic will impact all mental health disorders, so precautions should be taken for those as well.

Future Implications

The current literature shows great concern for a mental health crisis among children and adolescents. Action from professionals is needed to combat the negative outcomes as well as to

prevent future negative outcomes. Multidisciplinary teams involving schools, health care provider, parents, and other professionals working with youth need to be created to provide holistic intervention and prevention strategies to fight the effects of the COVID-19 pandemic on children and adolescents' mental health and well-being.

Limitations

While there are many strengths to this study, including that it adds to the conversation on youth mental health and it allows us to better understand future needs, there are various limitations to this review. The most prominent limitation is the fact that this topic is evolving and changing every day. The COVID-19 pandemic has now been present in the world for over two years. This makes drawing conclusions about the effects of the COVID-19 pandemic on the mental health and well-being of children and adolescents very difficult because new information is available every day. The time frame in which the literature search was conducted is also a limitation. New information is being released daily regarding this topic, so a cutoff date was needed for the literature search. As a result, there is bound to be new, relevant information that was not included in this review.

There is also a limitation around the available data discussing youth suicide and NSSI. The majority of data available are estimates due to the sensitivity of these topics, especially within the youth population. There are numerous factors which may be the cause for an individual to engage in NSSI or suicidal ideations or behaviors, so determining the effects that the pandemic alone had on this population with regards to suicide and NSSI is difficult.

A third limitation is the lack of longitudinal data on this topic. There have been numerous cross-sectional studies focusing on the mental health and well-being of children and adolescents over short periods of time throughout the pandemic, yet the long-term effects are still unclear.

The closest comparison would be to the Spanish flu in 1918, but the world is a very different place today and the aggressive nature of the COVID-19 pandemic may make previous crises and their findings incomparable to the long-term effects of the COVID-19 pandemic.

Additionally, due to the nature of the COVID-19 pandemic, in-person studies are less common, so most research on the topic has been completed through self-reports. This opens the door for biases to influence participants' responses. This also makes observational and natural surveillance studies more complicated to conduct. Due to the prevalence of this topic there is also a lack in longitudinal data. The lack of longitudinal data makes drawing conclusions around effective prevention and intervention strategies difficult.

The access to support for mental health as well as resources for developing resilience and coping skills varies for everyone. This variety makes generalizing results difficult because what may be beneficial to one child might not be beneficial to another child. Youth rely on various protective factors, and they differ amongst youth. This highlights the importance of determining effective and appropriate intervention and prevention strategies for all individuals.

Conclusion

The COVID-19 pandemic created an unprecedented crisis around the world, and the secondary effects of the COVID-19 pandemic have the potential to cause a long-term mental health crisis among children and adolescents. The risks to children and adolescents presented by the COVID-19 pandemic must be addressed to ensure their well-being and development is being advocated for. Professionals, parents, and individuals interacting with children and adolescents must work together to develop interdisciplinary and multi-dimensional approaches to address the challenges that today's youth are facing. Monitoring this population for long term outcomes is also necessary. Taking action promptly is imperative to ensure appropriate and effective

intervention and prevention strategies are being implemented to offset the risks presented by the COVID-19 pandemic.

APPENDIX A: LITERATURE REVIEW ARTICLES BY THEME

Theme	Article
Child Maltreatment	Cuartas, 2020
	de Figueiredo et al., 2021
	Lawson et al., 2020
	S. J. Lee et al., 2020
	Rodriguez et al., 2021
NSSI	Hasking et al., 2021
	Listernick & Badawy, 2021
	Ougrin et al., 2021
	Plener, 2021
	Zetterqvist et al., 2021
Suicide	Asarnow & Chung, 2021
	Critchfield, 2021
	Hill et al., 2021
	J. Lee, 2020
	Moutier, 2021
	Odd et al., 2020
	Reger et al., 2020
	Rossen et al., 2021
	Yard et al., 2021
Depression & Anxiety	Chen et al., 2020
	Gupta & Jawanda, 2020
	Listernick & Badawy, 2021

	Pieh et al., 2021
	The Wall Street Journal, 2021
	Zhang et al., 2020
Positive Outcomes	Asarnow & Chung, 2021
	Di Carlo et al., 2020
	Hasking et al, 2021
	S. J. Lee et al., 2020
	O'Brian & McNicholas, 2020
	Perry, 2021
	Sabo, 2021
	Tufts Medical Center, 2021

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