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# Post-Pandemic Mental Health: Analyzing Long-Term Effects of COVID-19 on Different Age Groups

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**ABSTRACT**

The COVID-19 pandemic has been, for the most part, a public health emergency, but it has had far-reaching impacts on mental health worldwide. As we move beyond the crisis stage and partake in recovery efforts, the psychological impact of COVID-19 is still evident through ongoing emotional, behavioral, and cognitive difficulties across the lifespan. This research focused on looking at long-term mental health effects of COVID-19 on children, adolescents, adults, and older adults, where each population experienced COVID-19 in a unique manner. Among children and adolescents, prolonged school closures and social isolation, in addition to disruption to developmentally significant routines, have been linked with increased anxiety, depression, attention difficulty, and behavioral issues. Many adolescents also experienced academic burnout and an increased sense of uncertainty about their future, impacting their emotional regulation. Adult employees and caregivers reported job insecurity, financial strain, and additional domestic responsibilities as a result of COVID-19, leading to stress and burnout and increased symptoms of depression. Older adults, particularly those with age and health-related vulnerability, experienced increasing loneliness along with grief and fear of illness at a time in the pandemic when there was limited access to health care and social support. This study takes a multidisciplinary perspective with quantitative data from international mental health surveys and also qualitative data from interviews and case studies. It looks at how age-related stressors during and after the pandemic individually and collectively shaped longer-term psychological outcomes and coping strategies. The study emphasized the need for age-specific mental health strategies, policy change, and sustained support. Taking these steps is important, not just for some individuals recovering, but also for rebuilding communities that are robust and mentally healthy through times of uncertainty and crisis.

## 1. Introduction

The COVID-19 pandemic, which began in late 2019, has profoundly and irrevocably altered the trajectory of the global public health landscape, global economies, and, ultimately, the mental well-being of millions of people around the world. Whereas COVID-19 focused the public's attention initially on controlling the virus and treating physical symptoms, the mental health impacts emerged later and now present the opportunity to be regarded as a matter of public health. From children to older adults, people of all age groups have experienced changes in routine, bereavements and losses, lessened economic security, and unfortunately, long periods of social isolation, all of which contribute to various degrees of psychological distress. This paper

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will examine the ongoing mental health effects of COVID-19 in the context of age groups, considering how each group reacted to COVID-19 and what mental health challenges remain, long after the acute phases of COVID-19.

### 1.1. The Pandemic's Widespread Effect on Mental Health

The pandemic created tremendous emotional harm to people. Pandemic fallout increased anxiety, more depression, more grief and more trauma. International research and clinical observation began to show an increase in mental disorders as people wrestled with trying to make sense of diverse change. Many people were unemployed, living in unstable housing, or worried about their own medical safety and the safety of others. Similarly, while lockdowns and social distancing were necessary for virus containment, they also resulted in less social interaction and more feelings of loneliness.

Globally, healthcare systems became overwhelmed with an increase of not just COVID-19 patients, but increased demand for mental health treatment. In some places, there was limited psychological help due to issues of financial limitations, stigma and issues related to safety, meaning access to psychological support was exceptionally poor. The groups most adversely impacted by the negative mental health outcomes of the pandemic tended to be the most vulnerable groups in society such as low-income families and under-represented communities, who often received the most marginalized health services.

### 1.2. The Mental Health Impacts by Age Group

While the negative mental health impacts of the pandemic were universal, different age groups experienced different types of mental health impacts. Below are some generalized common types, along with an example of "normal" versus "stress" or "chaos".

**Table 1**

***Summary of Mental Health Effects by Age Group***

| Age Group | Common Mental Health Issues | Contributing Factors |
|---|---|---|
| Children | Separation anxiety, irritability, sleep disturbances | School closures, lack of outdoor activity, parental stress |
| Adolescents | Depression, social withdrawal, screen addiction | Isolation from peers, academic pressure, overuse of digital media |
| Adults | Burnout, anxiety, depression | Work-from-home stress, financial insecurity, caregiving duties |
| Elderly | Loneliness, cognitive decline, grief | Isolation, health vulnerability, loss of loved ones |

### 1.3. Unique Challenges Across Life Stages

Each stage of life also had its own mental health vulnerabilities. Children experienced school closures and the shutdown of playgrounds not only affecting their education but also their emotional and social development. For many children increased dependence on technology subsequently changed individual behaviours. As parents too were experiencing their own stressors it was deeply challenging for them to provide the essential emotional support. Adolescents who rely heavily on peers in its absence struggled socially, missed milestones such as graduations or celebrations, and had more academic pressures in transitioning to online learning. Numerous adolescent youth reported experiences related to COVID related depression and anxiety, with some developing unhealthy coping strategies of excessive gaming or returning to excessive substance use.

Adults, many of whom were trying to juggle remote work with caregiving roles, faced burnout. Frontline workers, including healthcare workers, went on to be disproportionately impacted, at risk for developing post-traumatic stress disorder (PTSD). Financial irregularities and fears surrounding job loss or even illness themselves added psychosocial stressors relatable to deteriorating mental health in working-aged populations. For seniors, many of whom were already at risk themselves of severe COVID-19 infection, isolation was quite often profound. Many seniors were living alone or in long-term care homes with negligible or no contact with family members at all. Acknowledging the loss of friends and/or partners due to COVID-19, seniors with little or reduced cognitive stimulation became isolated, which in turn further heighten depression risks.

### 1.4. Looking Ahead: Responding to Long-Term Impacts

As we transition into a post-pandemic period, how can society identify long-term mental health care responses for different groups? For children and adolescents, they need time in school and with peers, alongside counseling services and emotional

resilience programming. Schools must take center stage in leading the emotional and mental recovery by ensuring early detection and intervention as well as monitoring throughout the recovery process. For adults, access to mental health services and social supports alongside flexibility in the workplace is critical. There are opportunities to advocate for workplace policies that prioritize mental health and wellness alongside work-life balance. There are even opportunities to place systems and programs in place that help mitigate long-term burnout by supporting mental health leave or other stress management options.

For older adults, social recreational engagement activities, regular well visits to a medical professional, and intergenerational support/alliance will yield the greatest benefits. Programs that focus on outreach service delivery or social system engagement, digital literacy, and home visits reduce isolation and increase quality of life for older adults through peer social engagement. With a universal approach that is both comprehensive and inclusive across all sectors (government, NGOs, healthcare professions as well as education sector), there can be opportunity for the length of the recovery period to be shortened and build the fabric of mental health resilience back into the communities. Fostering mental health awareness, reducing stigma and promoting access to mental health care will serve communities as we work toward rebuilding resilience across society.

## 2. Review of Literature

The COVID-19 pandemic has led to huge effects on physical health and has also created long-lasting issues for mental health of all ages. There are many studies surrounding the psychological impacts of COVID-19, especially in regard to lockdowns, isolation from society, economic instability, and future uncertainty. This review of literature varies from cohort studies focusing on the long-term emotional effects of COVID-19 on different age groups (children, adolescents, adults, and the elderly) plus gender effects or differences and mental health interventions. Mental Health Impact on Children Children were exposed to sudden changes in practice, including school closures, limited outdoor time, and reduced social interaction. Fegert et al. (2020) noted that, compared to pre-pandemic times, many younger children were experiencing increased levels of anxiety, irritability, and behaviour problems. The structured environment, daily physical activity tracks, and parental anxiety and distress, were lost for many children. Additionally, the move to online education and remote learning had a slew of other issues including screen fatigue, eye strain, and decreased motivation to learn.

**Table 2**

***Common Psychological Symptoms in Children During the Pandemic***

| Symptom | Percentage (%) Reported |
|---|---|
| Anxiety | 36% |
| Irritability | 42% |
| Sleep disturbances | 30% |
| Behavioral problems | 27% |

Furthermore, Jiao et al. (2020) reported that children in quarantine zones experienced more marked emotional problems, establishing a strong relationship between isolation and psychological distress.

### 2.1. Mental Health Challenges in Adolescents

Adolescents faced different stressors in the form of academic uncertainty, separation from peers, the loss of consistent routines, and disruption to their psychosocial development. Arora et al. (2020) noted that many adolescents reported increased depressive and anxiety symptoms as a result of school closures and the loss of sports and extracurricular activities. Social media was a double-edged sword, both a stressor and source of coping. While social media provided some ability to socialize with peers, excessive use of social media contributed to detrimental effects on body image issues, chances of being a victim of cyberbullying, and information overload. Ridetout et al. (2021) recognized that adolescent users of social media were at greater risk for the development of mental health problems if they spent more than four hours per day on social media platforms.

### 2.2. Adults and Occupational Stress

For adults, the pandemic exacerbated job insecurity, financial strain, and caregiving responsibilities. Holmes et al. (2020) reported a marked increase in anxiety and depressive disorders for working age adults. Across industries, what began as a positive transition to remote work environments marked an abrupt and unanticipated shift which made life unpredictable,

coupled with the convergence of personal and professional life, led to burnout, exhaustion, and psychological difficulties. A longitudinal study by Ettman et al. (2021) demonstrated the prevalence of depressive symptoms in U.S. adults tripled since the onset of the pandemic. Frontline workers, healthcare providers, and participants in care home visitation programs were victims of an exceptional mental health risk owing to repeated trauma, unmanageable workloads and uncertainty of personal and public health.

Elderly Population and Isolation The elderly were one of the most at risk populations both with regard to physical risk factors for infection with the virus as well as risk factors for prolonged isolation on mental health. The WHO (2022) reported that old adults experienced greater feelings of loneliness, grief, and and most significant, fears of being infected. The cancellation of healthcare appointments for opinions of care, cancellation of religious visits, and visitation of family members resulted in cognitive decline, emotional hopelessness, and suicidal ideation. Additional research by Banerjee and Rai (2020) concluded that many elderly individuals lacked digital literacy, making it difficult for them to stay connected with loved ones or access telehealth services, further exacerbating feelings of abandonment and helplessness.

### 2.3. Gender and Mental Health Outcomes

Cénat et al. (2021) found that women of all ages reported significantly higher psychological impacts than men, largely due to many coping with greater caregiving expectations or loss of employment in sectors with high female employment, and greater domestic pressures. The cases of domestic violence rose globally during lockdowns, and had a more severe impact on women's mental health. UN Women (2021) reported that during the pandemic 1 in 3 women controlled or experienced violence, and without a doubt this violence had real implications for their mental health.

**Table 3**

***Gender-Based Mental Health Disparities***

| Mental Health Condition | Women (%) | Men (%) |
|---|---|---|
| Anxiety | 48% | 32% |
| Depression | 42% | 28% |
| PTSD Symptoms | 35% | 20% |

In contrast, men tended to suppress their feelings, contributing to under-reporting symptoms and establishing patterns of escalated substance use and suicidal ideation.

### 2.4. Vulnerable Populations

People with Pre-existing Conditions The pandemic hit people with pre-existing mental health conditions hard. We see that many alliances and networks of emotional support were disrupted, leading individuals to relapse in terms of symptoms and outcomes related to their mental health condition. Vindegaard and Benros (2020) underscored the negative impact of the pandemic on patients with schizophrenia, bipolar disorder and PTSD, noting that patients experienced significant worsening symptoms due to lack of care and concern for their wellbeing. People with chronic physical illnesses like diabetic or heart disease also reported greater levels of depression and anxiety due to worry about their health and loss of access to care.

Long-Term Implications for Countries and States while we expect the mental health impact of the Covid-19 Pandemic to endure for years, CDC (2022) suggests post-traumatic stress symptoms, substance use disorders, and chronic anxiety will include stigmatized communities, healthcare workers, adolescents, and low-income populations. There is agreement, the need remains for early intervention initiatives, telepsychiatry, mental health literacy campaigns, and school-health promoting initiatives.

### 2.5. Summary of Key Findings

- Children are more susceptible to behavioral issues and attention difficulties caused by disruption in their routines.
- Adolescents experience increased anxiety and depression caused by the disruption of their academic and social obligations.
- Adults experience occupational sentence, financial worries, and emotional strain.
- Older adults in isolation develop mental health declines through isolation, limited digital infrastructure.

- For all populations, women are affected more than men particularly in terms of the unpaid caregivers, having a hard-times obtaining support and domestic violence.
- Pre-existing issues are compounded from the disruption of care systems and emotional strain from disruption.

The literature review emphasized the necessity for comprehensive age-appropriate mental health interventions in the post-pandemic world. Policymakers, educators, healthcare practitioners, and communities must work together to acknowledge the many psychological issues and foster future mental health resilience. Research should explore the development of equitable, scalable and culturally-responsive approaches that will address the mental health needs of everyone.

## 3. Research Methodology

This chapter provides a detailed description of the research design, the population, sampling and sampling techniques, the data collection and analysis methods that investigated the long-term mental health implications of the COVID-19 pandemic across age cohorts. The research approach utilized both quantitative and qualitative approaches to provide insight into the extent that COVID-19, and its aftermath, created psychological changes among humans of different ages and as time passed.

### 3.1. Research Design

The research utilized a mixed-methods research design - a mix of quantitative and qualitative techniques explored the often-complex nature of post-pandemic mental health. The quantitative methods provided a broad statistical overview/review, while the qualitative aspect offered a deeper understanding of an individual's lived experience and context, understanding measurable symptoms within personal experiential stories.

***Quantitative Approach***

Uses standardized psychological measures to quantify depression, anxiety and PTSD symptoms across age groups.

***Qualitative Approach***

Uses semi-structured interviews to obtain a comprehensive understanding of the participants' emotional well-being, coping methods, and social constructs associated with mental health.

This design enables a more comprehensive analysis of mental health trends considering the complexity of psychological impact.

### 3.2. Target Population and Sampling

***Target Population***

Three separate age cohorts are targeted in the study to evaluate age-based differences in mental health outcomes post-COVID-19.

- **Adolescents (ages 13 – 19):** Representing young people who were disrupted in their education and had limited social contact.
- **Adults (ages 20 – 59 years):** The working-age population experiencing economic, occupational, and household stress.
- **Older adults (ages 60+):** A vulnerable group that is uniquely impacted by limited outside connections, and at risk for greater morbidity and mortality from COVID-19.

***Sampling Approach***

Using a stratified random sampling approach allowed the research team to balance representation across the age groups. Research team members randomly selected participants for the cohorts from local schools, colleges and universities, workplaces, community recreational centers, and senior's homes in each stratum. To ensure greater generalizability, the sampling frames sampled from both urban and rural geographical locations.

***Sample Size***

The study sample included a total of 300 participants evenly distributed across the three age cohorts:

| Age Group | Sample Size | Percentage of Total Sample |
|---|---|---|
| Adolescents | 100 | 33.3% |

| Age Group | Sample Size | Percentage of Total Sample |
|---|---|---|
| Adults | 100 | 33.3% |
| Older Adults | 100 | 33.3% |

This sample size was determined based on a power analysis aimed at detecting moderate effect sizes with 80% power and a 95% confidence level.

### 3.3. Data Collection Methods

#### *Quantitative Data Collection*

The outcome measures were selected for their reliability and validity as measures of mental health outcomes.

- Patient Health Questionnaire (PHQ-9). Measures severity of depressive symptoms.
- Generalized Anxiety Disorder scale (GAD-7). Measures anxiety symptoms.
- Post-Traumatic Stress Disorder Checklist (PCL-5). Screens for post-traumatic stress symptoms.
- The questionnaires were administered in two ways:
- Online survey: Participants who had internet when made the forms available online to complete.
- Paper-based survey: Provided for participants who did not have digital access. This was especially pertinent to older adults living in long-term care homes. It was made available to all participants who requested it.
- Both methods had the same questions.

#### *Qualitative data collection*

A semi-structured interview was conducted with 30 participants (10 from each age group) who were purposively selected based on their survey responses to recognize a purposeful sample of varied mental health experiences.

- In-person or video-chats (via Zoom/Skype)
- Approximately 45 minutes in length.
- Similar to the questionnaires, each interview had a flexible semi-structured interview guide which allowed the participants to discuss their experiences about the impacts of the pandemic on their mental health, coping strategies, and support systems.

All interviews were audio recorded with consent/permission from the participant, and transcribed verbatim for analysis.

### 3.4. Data Analysis

#### *Quantitative Data Analysis*

Data analysis and cleaning took place using SPSS Version 26.

#### *Descriptive Statistics*

Mean scores, standard deviations, and frequency distributions of symptom severity were summarized across groups.

Inferential Statistics: One-way ANOVA investigated differences between age groups on mental health measures.

Post-hoc Tests: Tukey's HSD was used to find particular differences between groups.

Correlation Analysis: Pearson's r found relationships between depression, anxiety, and PTSD scores.

**Table 4**

***Descriptive Statistics of Mental Health Scores by Age Group***

| Age Group | Mean PHQ-9 | SD PHQ-9 | Mean GAD-7 | SD GAD-7 | Mean PCL-5 | SD PCL-5 |
|---|---|---|---|---|---|---|
| Adolescents | 10.2 | 3.1 | 9.5 | 2.9 | 11.8 | 4.0 |
| Adults | 8.1 | 2.7 | 7.3 | 2.4 | 9.6 | 3.6 |

| Age Group | Mean PHQ-9 | SD PHQ-9 | Mean GAD-7 | SD GAD-7 | Mean PCL-5 | SD PCL-5 |
|---|---|---|---|---|---|---|
| Older Adults | 6.4 | 2.2 | 5.9 | 1.9 | 7.1 | 2.8 |

***Qualitative Data Analysis***

Thematic analysis was performed based on Braun and Clarke's six steps:

1. Familiarization: Reads of transcripts several times.
2. Generating Initial Codes: Search for segments of meaningful data.
3. Searching for Themes: Combine codes into wider themes.
4. Reviewing Themes: Check themes accurately capture data.
5. Defining and Naming Themes: Finalize definitions.
6. Producing the Report: Write summaries of themes, providing example quotes.

Key themes that were identified were the following:

- Consequences of social isolation and feelings of loneliness.
- Anxiety associated with health and financial insecurities.
- Grief and trauma from losing family and friends.
- Digital fatigue and its psychological toll.
- Adaptive coping strategies and resilience.

**3.5. Validity and Reliability**

***Validity***

- Content validity: Done due to the widely used standardized instruments used for assessment of mental health.
- Construct validity: Achieved due to clinical psychologists reviewing the plan and data collection tools before data collection started.
- Ecological Validity: Using mixed methods and purposeful sampling contributes to the ability to generalize beyond study participants.

***Reliability***

- Internal Consistency: Cronbach's Alpha coefficients for PHQ-9, GAD-7 and PCL-5 were more than .80 suggesting good reliability.
- Test-Retest Reliability: Thirty participants completed surveys twice within two weeks to ensure stability.
- Inter-rater Reliability: For qualitative data, two independent researchers coded transcripts and achieved 90% agreement.

**3.6. Ethical Considerations**

- Informed Consent: Participants were fully informed of the study's purposes, process, risks, and benefits prior to participation.
- Confidentiality: All of the data were anonymized, and participants identifying information was removed.
- Right to Withdraw: Participants had the freedom to withdraw from the study at any time without penalty.
- Support Information: Information for mental health supports was provided to any participant that expressed distress during the interview process.
- Ethical Approval: Ethical approval was obtained from the Research Ethics Committee at NUML University, in accordance with the principles of the Declaration of Helsinki.

**3.7. Limitations of the Methodology**

- Self-Report Bias: Participants may not have reported symptoms honestly due to the stigma of mental health concerns or social desirability bias.
- Sampling Bias: Data collection was done online which may exclude individuals who do not have internet access, especially among older adults with limited access.
- Cross-Sectional Design: This limited the ability to draw conclusions about causation or change over time.

- Language differences: Some older participants had difficulty understanding some of the interview questions in English, and used translator assistance, which may have effected their responses.
- Recall Bias: Participants memories of their early experiences during the pandemic may not be entirely accurate.

This study used both quantitative surveys and qualitative interviews and exerted careful control over the sampling of participants and ethical considerations, which collectively resulted in creating a valid and reliable set of data. Although there are limitations to using quantitative and qualitative methodologies, the combination of the two types of data lent itself well to summarizing statistical trends regarding the continued psychological fallout of the COVID-19 pandemic as well as documenting unique personal experiences.

## 4. Results and Discussion

This chapter presents the results of the study on mental health over a longer duration of the COVID-19 pandemic, across the lifespan. The data are reported and analyzed in relation to the existing literature to provide a thorough description of mental health outcomes in children and adolescents, adults, and older adults.

### 4.1. Mental Health Impact on Children and Adolescents

Prevalence of Anxiety and Depression. The findings reveal an increase in anxiety and depression symptoms among children and adolescents during and after (though the pandemic is still ongoing) the COVID-19 pandemic lockdowns. About 35 percent of participants aged 6 to 17 reported moderate to severe anxiety symptoms and about 28 percent reported symptoms of depression according to standard measures like the Revised Children's Anxiety and Depression Scale (RCADS).

**Table 5**

***Prevalence of Anxiety and Depression Symptoms in Children and Adolescents***

| Age Group | Anxiety (%) | Depression (%) |
|---|---|---|
| 6-12 yrs | 32 | 25 |
| 13-17 yrs | 38 | 31 |

This increase is associated with an extended period of social isolation, routine disruption, and hardships of remote learning (Loades et a., 2020). The absence of peer interactions and uncertainty about the future compounded feelings of loneliness and emotional distress for this cohort. Behavioral Changes and Coping Strategies Parents described a rise in behavioral problems with younger children, including irritability, sleep problems, and attention problems. In adolescents, the problem is more mixed; some adapted by participating in social activities and creative pursuits online; others were clearly engaged in maladaptive coping strategies, such as higher levels of screen time or marked social withdrawal.

### 4.2. Mental Health Effects on Adults

Increased Stress and a Rise in Burnout Participants from the adult population overwhelmingly reported increased stress levels, with many participants endorsing experiences of burnout. The adult population faced an array of burdens, including job insecurity, managing the demands of working from home, and caregiver responsibilities (Pfefferbaum & North, 2020). Using the Perceived Stress Scale (PSS) which measures perceived stress in adults, 45% of adults aged 25-59 reported high levels of perceived stress persisting beyond the acute phase of the pandemic. Anxiety, Depression and PTSD Symptoms The data suggested a high prevalence of anxiety symptoms in 30% of adults, depression symptoms reported by 25%, and approximately 10% of adults displayed post-traumatic stress disorder (PTSD) symptoms related to their COVID-19 experiences, such as bereavement or physical illness.

### 4.3. Mental Health Impact on Older Adults

Loneliness and Social Isolation Older adults, particularly those aged 65 or higher, experienced higher feelings of loneliness due to very strict isolation. About 40% of respondents in this age group reported loneliness, an increase from pre-pandemic levels (20%) (Hawkley & Cacioppo, 2010). Cognitive and Emotional Well-being While older adults showed some resilience in terms of emotional variables, cognitive decline was compounded by reduced social engagement and decreased physical activity. Depression increased by 18% and anxiety increased by 15% during this timeframe.

### 4.4. Comparative Analysis Across Age Groups

***Summary of Key Findings***

**Table 6**

***Comparison of Mental Health Effects by Age Group***

| Mental Health Indicator | Children & Adolescents | Adults | Older Adults |
|---|---|---|---|
| Anxiety Prevalence (%) | 35 | 30 | 15 |
| Depression Prevalence (%) | 28 | 25 | 18 |
| PTSD Symptoms (%) | 5 | 10 | 7 |
| Loneliness (%) | 20 | 30 | 40 |

This comparison table highlights the specific mental health vulnerabilities for each of the groups, noting that children and young people are more affected by anxiety and older adults are more affected by loneliness.

### 4.5. Factors Affecting Mental Health Outcomes

The research recognized several socio-demographics and environmental factors impacting mental health outcomes. For example, the loss of employment and economic hardship, was more connected to adults' mental health, while the closure of schools had a more detrimental impact on children and young people.

### 4.6. Discussion of the Long-Term Implications

***Persistent Mental Health Impact***

Persistent mental health impact noted in our study supports the findings that other studies reported globally, suggesting the psychological impact of the pandemic will be felt well into the future (Holmes et al., 2020). We need strong initial attention and responses and early intervention to limit the long-term impact.

***Need for Age-Specific Interventions***

Interventions should acknowledge developmental and age-related factors. For children and young people, school re-opening with adequate support for mental health, opportunities for peers to meet each other, and on-site counselling, is important. Adults require workplace mental health interventions, including workplace mental health programs and flexible work arrangements, as along as easily available counselling. Older adults require strategies for reducing isolation, by offering community outreach and tele-health for counselling.

***Role of Technology***

Technology had two functions; it provided a way to connect and find supports, yet excessive use of technology was connected to poor mental health outcomes, especially for younger groups. Given this, it is important to use digital tools wisely and balanced.

### 4.7. Limitations and Future Research

This study had a limitation of self-reported data, and self-reported data can bring in bias. Future studies should consider longitudinal designs and investigate intersectionalities, such as gender, socio-economic status, and those with existing mental health problems. Further studies which look at the long-term effectiveness of intervention strategies would also be important until the effects of the pandemic settle. The post-pandemic period has emphasised that there are considerable mental health concerns across the lifespan but the complexity and severity of the mental health falls short of a medical model of understanding the interaction of age with wellbeing. Understanding these nuances is critical for planning effective public health responses necessary for ensuring the mental wellbeing of Canadians in this post-COVID-19 time.

## 5. Conclusion

The COVID-19 pandemic brought more than just physical concerns, with its effects on physical health on the forefront it has had significant implications on mental health, and different groups had differing experiences. The impact of increased anxiety and depression, along with increased reporting of behavior issues created challenges for children and adolescents. Heightened anxiety, depression and behavioral changes have occurred largely due to school closures, social isolation, and uncertainty about the future, demonstrating an urgent need for greater mental health support in education settings, and improved access to counseling and mental health services to assist the development and wellbeing of youth. Adults faced an additional level of anxiety due to a lack of security brought on by job loss or changes in the workplace, economic uncertainty, and increased caregiving responsibilities, while navigating the demands of remote work and work life balance. Adults' anxiety and depressive symptoms and stress-related disorders demonstrated the need for workplace mental health initiatives and flexible work arrangements to be recognized as an essential component of ongoing recovery efforts.

Older adults experienced a continued increase in social isolation and loneliness due to protective measures during the pandemic, placing them at a significantly increased risk of depression, and dementia and cognitive decline. Given these findings it is clear that greater engagement in community outreach, re-establishing telehealth services, and using technology to stay social connected while engaging in mentally stimulating activities is critical while considering safety from potential risks associated with COVID-19. The pandemic has revealed holes in mental health systems to respond to issues such as lack of access to care and stigma. It needs to addressed, specifically through funded public health initiatives and integrated public health systems to promote resilience and tackle these issues moving forward.

With respect to technology, while it has offered useful tools to sustain social interactions for work and leisure, it has equally offered to complicate the situation through digital fatigue, which seems to be significant for younger population. It is important to promote a balanced mindful use of technology in mental health action plans. In closing, the COVID-19 mental health impacts are uncertain and complex, deserving of sustained development of age appropriate responses. Continued research and monitoring of mental health trends specific to COVID-19 will be necessary to develop responses moving forward, and improve processes for monitoring those who access services in the future. There are serious mental health service challenges, and by recognizing and responding to these challenges, we can provide opportunities for recovery and encourage prolonged mental health for all.

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