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**The Impact of Covid-19 on Gender, School Types, Social and Emotional Wellbeing of  
School-aged Children in Minnesota, USA.**

**Conflict-of-interest statement**

The author whose names are listed immediately below certify that they have NO affiliation or involvement in any organization or entity with any financial interest in the subject matter or materials discussed in this manuscript. The authors certify that the submission is original work and is not under review at any other publication.

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**Abstract**

*This research aims to explore the impact of the COVID-19 pandemic on gender and school types, not forgetting the social and emotional wellbeing of school-aged children in Minnesota, USA. The research utilized stratified random sampling. A sample of 400 school-aged children were randomized from a population of 955,000 school-aged children in Minnesota*

*metropolis. The first stage involved the population being stratified into male and female, as well as public and private schools before a sample of 400 school aged children were randomly selected. Two instruments were utilized namely, The Social Well-Being Scale (SWBS) and The Emotional Well-Being Scale (EWBS). The result revealed significant results for male ( $\beta = .770$ ,  $t = 11.715$ ,  $p < .05$ ) and female ( $\beta = .363$ ,  $t = 4.903$ ,  $p < .05$ ) children leading to the conclusion that there was a significant difference between male and female in the impact of COVID- 19 on social wellbeing among school-aged children in Minnesota, USA. It further revealed that this impact is stronger among male children ( $\beta = .770$ ) than among female children ( $\beta = .363$ ). Also, the result revealed significant effect for private schools ( $\beta = .738$ ,  $t = 12.372$ ,  $p < .05$ ), but non-significant results for public schools ( $\beta = .110$ ,  $t = 1.237$ ,  $p < .05$ ). Thus, there was a significant difference between public and private schools in the impact of COVID-19 on social wellbeing among school-aged children in Minnesota, USA.*

*Based on the findings of this study, the following recommendations were made: School authorities and other stakeholders should tailor interventions to meet the specific needs of male and female children. Also, Government and school proprietors should strengthen support systems in private schools, including access to mental health resources, counselling services and social support networks, to help mitigate the negative effects of COVID-19 on children's wellbeing.*

**Keywords:** Gender, School types, COVID -19 Pandemic, Social wellbeing, School Aged

## **Introduction:**

The COVID-19 pandemic has presented a global health crisis with severe consequences on health and other developmental sectors such as politics, economics, education, and health. One of the challenges, in the field of mental health, has been the psychological implications of COVID-19, especially for vulnerable populations such as children and adolescents who are still developing their personality traits, social skills, and physical development. This developmental stage presents a lot of physiological and psychological changes, which are difficult to cope with without good information and social interaction. Although few years have passed since the start of the global pandemic, there is still a paucity in studies carried out in the field of mental health.

The current global health emergency due to COVID-19, has caused the world's population including children and adolescents, to change their lifestyles and behaviors, despite the initial conflict in understanding and adapting to the changes brought about by the emergency. Likewise, the entities in charge of health care, such as hospitals, clinics, non-governmental, and government organizations have had to carry out sanitary measures conditioned to the implications of the disease. For example, psychological care has been adapted to take into consideration the increase in mental health problems and thus the necessity for mental health care since the start of the pandemic.

According to the World Health Organization (WHO) 2018, care towards social and emotional wellbeing should not only be limited to the treatment of clinical mental disorders. To achieve this, health professionals should be sought to address all forms of mental health disorders by people who have gone through problems that affect their mental stability. Previously, the Pan American Health Organization (2016) through the Mental Health and Substance Use Unit (MHSUU), shared a strategy for the "Protection of mental health and psychosocial care in epidemic situations", emphasizing that governments must be competent to comply with these regulations.

This is so that the negative psychological impact of the pandemic will not threaten the health and life of the general population.

It is not the first time that humanity or a portion of it has been involved in emergencies like this. Such is the case of the Ebola outbreak that began in March 2014 in Guinea, where 27,000 cases and more than 11,000 deaths were registered in West Africa. The resultant effects of this outbreak were thousands of survivors, orphans, family members, sanitary personnel and other support workers who required attention and support in mental health care, not only their physical bodies (Mugele and Priest, 2014).

Similarly, the COVID-19 pandemic has caused thousands of children and adolescents to lose their parents, siblings and relatives. In addition, the daily concern of taking care of themselves to avoid getting infected, as well as triggering news on television, radio and social networks about the lethality of the disease can increase negative emotions. Furthermore, if any parent or relative works in a health center, they can have increased concern about their wellbeing. In a pandemic one does not only deal with the physical damage of the disease but also the psychological impact, which can reduce quality of health especially in children who are experiencing a lot of already unfamiliar things and changes in life.

The WHO (2020a), through a survey in 130 countries, was able to show that mental health issues as a result of the COVID-19 pandemic has affected 93% countries worldwide, emphasizing that the demand for mental health care exceeds the offer of service, which implies devastating effects of COVID-19 on many populations. In addition, 60% of the countries indicated obstacles to the development of mental health services aimed at vulnerable people, including children and adolescents (72%), the elderly (70%) and women who require prenatal or postnatal services (61%).

According to the review carried out by Araújo, Veloso, Souza, Azevedo and Tarro (2020) not many studies have been conducted on the impact that epidemics or pandemics have on the growth and development of children and adolescents. However, scientists have been able to corroborate that genetic predisposition can exist as a result of environmental influences, such as those experienced during a pandemic. This adverse experience affects learning abilities, adaptive behaviors, physical and mental conditions and long-term adult productivity. As has been the case with Ebola and HIV / AIDS, COVID-19 has brought with it an increase in diseases such as anxiety, depression, and stress and at present, has added confinement and social isolation.

School aged children make up approximately 24% of America's population. Only 4.7% accounted for COVID-19 cases in the US. This may be due to the finding that children under 12 years appear far less likely to contract and spread the virus, and to a lesser degree the same applied for older children (Markel 2020). Since the start of the pandemic, over 12 million US children have tested positive for COVID-19, as of January 2022, representing 18.9% of all COVID-19 cases (Children and COVID-19: State-Level Data Report 2022). It was observed that children can become seriously ill, sometimes developing pulmonary illnesses that result in hospitalization and, infrequently, death, with a small number of children developing Multisystem Inflammatory Syndrome-Child (MIS-C), presumed to be similar to autoimmune Steven Johnson Syndrome (Katlan, Nakip, Kesici & Bayrakci (2021).

Although most children and adolescents infected with COVID-19 appeared to have mild to moderate symptoms and limited mortality rates (Pavone, Ceccarelli & Taibi 2020), a recent review identified mental health problems such as anxiety, stress, depression, panic and infection, among these individuals (Hossain, Tasnim & Sultana 2020). According to the CDC, only 4.4 out

of 100,000 children have had to be hospitalized due to COVID-19, majorly lower than the 161.7 per 100,000 age range of 50-64 years of age who have been hospitalized (Markel 2020). The Minnesota Department of Health (2020) provided information that supported Markel's (2020) claim, as only 2376 covid-19 positive tests had occurred in the 0-12 age range, among nearly 87,000 Minnesotans with confirmed cases.

Furthermore, the impact of the COVID-19 pandemic on teachers in Minnesota was explored in an exploratory study, including 976 teachers who were conveniently sampled and surveyed. The Qualtrics version of the Swaggart Institutional Practice Under Crisis (SIPU) questionnaire containing 43 questions was used for the survey (Bradbury, Suarez-Sousa, Coquyt, Bockelmann, Pahl 2020). Teachers described the pandemic as "disruptive" to their present lives and teaching practices. However, despite the institutional challenges and education equity issues, teachers remained focused on providing relevant learning experiences for the students (Bradbury et al. 2020). Elevated stress levels were also observed in families in New York and Chicago, due to economic uncertainty, job loss, fears about contracting the virus and the psychological impact of school isolation and disruptions to daily life. Sparks (2020) reported that nationally, the mental health related hospital emergency rose by 24% for children ages 5-11 and 31% among adolescent ages 12-17, when compared to the same period in 2019. Mental health visits for every 100,000 pediatric hospital emergency each week rose steadily beginning about 3 months into the pandemic (Sparks 2020).

Therefore, this research study sought to describe the impact of COVID-19 on gender, school types, social and emotional wellbeing of school aged children in Minnesota, USA. Considering the sanitary measures established for COVID-19, and the implication of said measures in the lifestyle of the aforementioned population, the following hypotheses were tested:

1. There is no significant difference between male and female on the impact of COVID- 19 on the social and emotional wellbeing of school-aged children in Minnesota-USA.
2. There is no significant difference between public and private schools on the impact of COVID-19 on the social and emotional wellbeing of school-aged children in Minnesota-USA.

## **Materials and Methods**

### *Methodology*

The research methodology utilized to investigate the effects of COVID-19 on the social and emotional wellbeing of school-aged children in Minnesota-USA was adopted from existing literary evidence and scientific research. The research methodology addressed the methods and procedures used in the study. These include research design, population sample, sample technique, instrumentation, data collection and data analysis.

### *Research Design*

The study adopted a descriptive survey research design in which school-aged children in Minnesota-USA will be asked to complete a questionnaire enquiring about the impact of the COVID-19 pandemic on their social and emotional wellbeing during the period.

### *Sampling Technique*

The research utilized stratified random sampling. A sample of 400 school-aged children were randomized from a population of 955,000 school-aged children in Minnesota metropolis. The first stage involved the population being stratified into male and female, as well as public and private schools before a sample of 400 school aged children were randomly selected. This technique captured key population characteristics that were proportional to the overall population and was helpful in gaining detailed knowledge of the effects of COVID-19 on the social and emotional wellbeing of school-aged children in Minnesota-USA. The technique provided a clear criterion and rational for participant inclusion.

### *Data collection tools*

Two instruments were utilized namely, The Social Well-Being Scale (SWBS) and The Emotional Well-Being Scale (EWBS). The Social Well-Being Scale (SWBS) was adapted from the Social Well-Being Questionnaire (SWBQ) which assesses how a person experiences his or her own social life and how this is related to the construct of social well-being (Li, Yang, Ding & Kong, 2015). The SWBS consists of 36 items in a 5-point Likert format, which consists of five categories. Strongly disagree (1), disagree (2), neither agree/disagree (3), agree (4) and strongly agree (5). On the other hand, The Emotional Well-Being Scale (EWBS) was developed by Portia and Shermila in 2015 for the purpose of measuring the emotional life of teacher participants. The EWBS contains 26 items in a 5-point Likert-type format with possible responses ranging from 1 = Strongly Disagree to 5 = Strongly Agree. Sample items on the scale include: *In spite of physical and mental tortures in school/at work, I am calm and undisturbed* and *I don't bother about ups and downs in my life*. The developer reported a Cronbach's alpha coefficient of .83 which showed that the items on the scale are internally consistent with one another. Factor analysis was used to confirm the construct validity of the scale.

### *Data Collection*

Data was collected using an electronic poll for the randomly selected participants. This was completed by the Primary Researcher and trained Research Assistant within 4 weeks. This study was criterion-based. Criterion sampling involves selecting cases that meet some predetermined criterion of importance (Patton, 2001). Criterion sampling can help identify and understand information-rich cases and provide an essential qualitative component to quantitative data.

### *Data analysis*

Data was analyzed according to the following hypotheses:

Hypothesis one was analyzed using Independent –t –test

Hypothesis two was analyzed using Independent –t –test

## **Results**

### **Hypotheses 1**

There is no significant difference between male and female in the impact of COVID- 19 on social wellbeing among school-aged children in Minnesota, USA.

**Table 1: Coefficients of Simple Linear Regression Analysis for Difference between Male and Female in Impact of COVID-19 on Social Wellbeing**

GENDER Model			Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
MALE	1	(Constant)	9.790	1.994		4.911	.000
		COVID_19	1.038	.089	.770	11.715	.000
FEMALE	1	(Constant)	23.509	2.119		11.097	.000
		COVID_19	.401	.082	.363	4.903	.000

Dependent Variable: Social Wellbeing

Table 1 revealed significant results for male ( $\beta = .770$ ,  $t = 11.715$ ,  $p < .05$ ) and female ( $\beta = .363$ ,  $t = 4.903$ ,  $p < .05$ ) children. The null hypothesis is therefore rejected, while the alternative hypothesis is upheld, leading to the conclusion that there was a significant difference between male and female in the impact of COVID-19 on social wellbeing among school-aged children in Minnesota, USA. Table 1 further revealed that this impact is stronger among male children ( $\beta = .770$ ) than among female children ( $\beta = .363$ ).

**Hypotheses 2**

There is no significant difference between public and private schools in the impact of COVID-19 on social wellbeing among school-aged children in Minnesota, USA.

**Table 2: Coefficients of Simple Linear Regression Analysis for Difference between Public and Private schools in Impact of COVID-19 on Social Wellbeing**

TOS Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		

PRIVATE	1	(Constant)	11.020	1.789		6.160	.000
		COVID_19	.933	.075	.738	12.372	.000
PUBLIC	1	(Constant)	30.963	2.504		12.368	.000
		COVID_19	.122	.099	.110	1.237	.219

Dependent Variable: Social Wellbeing

Table 2 revealed significant results for private schools ( $\beta = .738$ ,  $t = 12.372$ ,  $p < .05$ ), but non-significant results for public schools ( $\beta = .110$ ,  $t = 1.237$ ,  $p < .05$ ). Thus, there was a significant difference between public and private schools in the impact of COVID-19 on social wellbeing among school-aged children in Minnesota, USA. These results further indicated that the impact of COVID-19 on social wellbeing was more pronounced in private schools than in public schools.

### Discussion:

The finding of the first hypothesis was that there was a significant difference between male and female in the impact of COVID-19 on social wellbeing among school-aged children in Minnesota, USA. Specifically, male children were more affected than female children. This could be due to differences in how boys and girls typically socialize, as well as differences in the ways they cope with stress. Although few of the studies on the situation of children in lockdown were comparative, some did point to differences based on gender and age. With respect to gender, boys were found to have worse sleep patterns, higher levels of hyperactivity, inattention and boredom (Cellini, Di Giorgio, Mioni, & Di Riso, 2020), and a greater decrease in self-concept (González-Valero et al., 2020). Moreover, a research study conducted in Spain also found that girls and younger children were more prone to engaging in physical activity and daily routines during the COVID-19 lockdown (Cachón-Zagalaz, Zagalaz-Sánchez, Arufe-Giráldez, Sanmiguel-Rodríguez, & González-Valero, 2021). It is important to note that this finding is correlational and does not necessarily imply causation. Further research is needed to explore potential underlying factors contributing to this gender difference. According to Zhu, Zhuang, and LP (2021), there is a lack of evidence that evaluates the specific changes in lifestyle and social life of different groups of children and adolescents as a result of the COVID-19 pandemic.

The finding of the second hypothesis was that there was a significant difference between public and private schools in the impact of COVID-19 on social wellbeing ( $\beta = .110$ ,  $t = 1.237$ ,  $p < .05$  for public schools;  $\beta = .738$ ,  $t = 12.372$ ,  $p < .05$  for private schools). Specifically, children in private schools were more affected than children in public schools. This could be due to differences in the resources available to private versus public schools, as well as differences in the ways these schools have adapted to the challenges posed by the pandemic. This finding correlates with a research study conducted by Burke (2020). Following the shutdowns, the Cato Institute's Neal McCluskey began tracking coronavirus-related private school closures. As of May 29, 2020 some 44 private schools had announced they were closing their doors for good, unable to make ends meet during the pandemic (Burke, 2020). It was estimated that more than sixty-two

hundred children were enrolled in those schools, 86 percent of which were Catholic schools. These children have lost access to their teachers, their classmates, and the school environment (Burke, 2020). Again, further research is needed to better understand these differences and inform strategies to support children's social wellbeing in both types of schools.

### **Conclusion and Recommendation:**

Based on the findings of this study, it was concluded that the COVID-19 pandemic has affected children's ability to engage in social activities, maintain relationships and experience a sense of belonging. Male children may be more vulnerable to social challenges resulting from the pandemic and private schools experienced a more pronounced impact compared to public schools. The pandemic has caused emotional distress and potentially affected their mental health and overall well-being, with the impact being stronger among female children compared to male children and stronger in public schools compared to private schools.

Based on the findings of this study, the following recommendations were made:

1. School authorities and other stakeholders should develop targeted interventions focus on promoting social connections, providing mental health support and fostering resilience among children.
2. School authorities and other stakeholders should tailor interventions to meet the specific needs of male and female children. Efforts should be made to provide appropriate support and resources that address the unique challenges faced by each gender.
3. Government and school proprietors should strengthen support systems in private schools, including access to mental health resources, counselling services and social support networks, to help mitigate the negative effects of COVID-19 on children's wellbeing.

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