

Coronavirus Pandemic: School Closure and Social-Emotional Well-Being of Gifted Students

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Abstract

The global outbreak of the Coronavirus pandemic has created significant educational disparities worldwide. This study aims to investigate the effect of school closure and social distancing during the COVID-19 pandemic on the psychological well-being of gifted students in Nigeria. Three research questions guided this study with focus on understanding the relationship between school closure, social isolation, and the psychological well-being of these students. To conduct this investigation, a descriptive survey research design was adopted for the study. A total sample of seventy students were selected among gifted students from Junior Secondary Schools (JSS III) in Ila/Boluwaduro/Ifedayo administrative zone consisting of four local government areas in Osun State, southwest region of Nigeria using a multi stage random sampling technique. Firstly, an instrument titled: Mathematics Achievement Test (MAT) was constructed by the researchers for the selection of gifted students from intact classes in the sampled schools. Data collection involved the use of Ryff's Psychological Well-being Scale (PWBS) and the Social Isolation and School Closure Perception Scale (SISCPS), developed by the researchers. The instruments used enjoyed 95.7% as only 67 were retrieved. Data analysis was done with SPSS, Mean, Standard Deviation, pearson product moment correlation and multiple regression. The findings of this study indicate that there is a significant association between school closure, social isolation, and the psychological well-being of gifted students. Both school closure and social isolation, when put

together resulted in the poorer and lower psychological well-being of students, with school closure having a greater negative impact. Based on these findings, the study recommends the development of stronger collaborations between teachers and parents in optimising educational development of gifted children and as well as creating a safe and supportive home environment for them.

Keywords: *COVID-19 pandemic, Gifted students, Psychological well-being, School closure, Social isolation*

Introduction

The COVID-19 pandemic and the subsequent measures taken to slow down the spread of the virus, such as school closure and social distancing, have had a significant impact on the psychological well-being of individuals worldwide. Recent studies have indicated that student engagement in school work was negatively affected during the early 2020 COVID-19 pandemic period (Klasen, Meienberg and Bogie, 2021; Shibu, 2021). This could be, because some restrictions imposed during the COVID-19 pandemic practically hindered face-to-face content delivery in schools as reported by Arowoshola (2020). Several authors around the world have researched students' academic concerns caused by the COVID-19 pandemic (Ebohon, Obienu, Irabor, Amadin and Omoregie, 2021; Ling, 2022; Filho, Wall, Bacchus, Mifsud, Pritchard, Lovren, Farinha, Petrovic and Balogun, 2022; Okagbue, Ezeachikulo, Nchekwubemchukwu, Chidiebere, Obisoanya, Ouattaraa and Nwigwe, 2022; Acheampong, 2023). Some of their discoveries are that students' physical access to educational facilities such as laboratories was hindered (Safi'i, Muttaqin, Hamzah, Chotimah, Junaris and Rifa'i, 2020). Moreover, the pandemic affected students' learning, aspirations, psychological well-being, and study habits all over the world (Cifuentes-Faura, Obor, To and Al-Naabi, 2021).

Among the individuals that were affected were the gifted students. The students happened to be a specific group who may face unique challenges and experiences during this time (Samsen-Bronsveld, Van der Ven, Speetjens and Bakx, 2022). Gifted students are those who show exceptional intelligence and abilities in comparison to their same-age peers. Gifted students are such a group that has certain characteristics, such as a high cognitive potential and creativity (Gagné, 2010; Pfeiffer, Shaunessey-Dedrick and Foley-Nicpon, 2018). They possess high intellectual potential and require specialised educational support and opportunities to maximise their potential, more so, their characteristic of creativity makes them to always venture to take initiatives ahead of peers. These students often thrive in environments that provide intellectual stimulation, social interactions with like-minded peers, and access to resources that challenge and engage their advanced abilities. However, the abrupt closure of schools and the shift to remote learning during the COVID-19 pandemic disrupted the educational landscape for all students, including the gifted. These students may face various challenges related to school closures and social isolation, which can impact their psychological well-being.

During COVID-19 pandemic there was a loss of intellectual stimulation for gifted

students because of the Covid-19 pandemic, since such children often rely on rigorous academic programmes and specialised resources at school to foster their intellectual development (Kaya and Islebeller-Bozca, 2021; Al-Maskari, Al- Riyami and Kunjumuhammed, 2022). Although there were online classes, the majority of the students with special needs did not have access to (adequate) online teaching and learning (Kuhfeld, Soland, Tarasawa, Johnson, Ruzek and Liu, 2020; Rwigema, 2021). Al-Maskari (2022) reported that learning difficulties, lack of attention from teachers, and increasing workload have restricted students' ability to concentrate during online classes.

The sudden shift to remote learning may not adequately provide the same level of intellectual challenge, leading to a potential loss of stimulation and reduced engagement in learning activities. During the pandemic, there was limited social interaction with Peers. Gifted students often benefit from socialising and collaborating with intellectual peers who share similar interests and passions. School closures and social isolation measures can lead to a decrease in social opportunities, including in-person interaction with like-minded peers, special interest clubs, or extracurricular activities that foster intellectual and social growth. The Pandemic reduced access to specialised resources. Many gifted interacted with resources such as advanced courses, mentorship programmes, or specialised learning strategies that are not easily replicable in online learning environments. Lack of access to these resources during the pandemic may hinder their learning progression and potentially lead to feelings of frustration or disengagement.

The pandemic has emotional and mental health effect on gifted students. The pandemic may already caused the children to experience heightened sensitivity and intensity in their emotional responses compared to their peers (Aristovnik, Keržič, Ravšelj, Tomažević, and Umek, 2020; Duraku and Hoxha, 2020). Duraku and Hoxha (2020) found that a majority of students in higher educational institutions reported moderate levels of stress (65.4%), while Aristovnik, et al. (2020), rightly noted that students experienced boredom, anxiety, and frustration due to the adoption of particular hygienic behaviours that prevented them from performing simple daily practices such as shaking hands and getting in touch with their family members and friends. The added stressors of the pandemic, such as uncertainties, family concerns, and disruption of daily routines, can exacerbate anxiety, depression, and other mental health issues.

There could also be unequal access to technology and resources because of COVID-19 pandemic. Disparities in access to technology and an adequate learning environment may further compound the challenges faced by gifted students from underprivileged backgrounds (UNICEF, 2020). The United Nations Education Fund (UNICEF, 2020) confirmed that access to the technology and materials needed to continue learning while schools are closed is desperately unequal. As the crisis continues to unfold, it is becoming clearer every day how educational disruptions caused by the COVID-19 pandemic has deepened the digital divide for millions of American college students — particularly those who belong to underserved populations (Denon, 2022). This digital divide refers to unequal access to computers and the Internet facilities due to socioeconomic and geographic barriers. Denon (2022) opined that lack of access to reliable internet connections, computers, or quiet study spaces can hinder their ability to fully engage in remote learning and worsen feelings of isolation.

The pandemic has escalated and threatened the welfare of human beings globally, and this public health emergency generates fear and leads to a spectrum of psychological consequences (Liu, 2020), ranging from distress responses such as anxiety, depression, and substance abuse, to behavioural changes such as difficulty sleeping and stress eating. Before the pandemic started, one in five college students had experienced one or more diagnosable mental disorders worldwide (Zhai and Du, 2020), and the psychological effect of COVID-19 can increase this number and exacerbate students' mental health issues. While all students are vulnerable to the effect of school closure, social isolation, and quarantine, those that are gifted are more vulnerable because of their nature of exploration of nature in learning. They have certain characteristics that predispose them to experiencing intense emotions or anxiety as a response to COVID-19.

Gifted and talented students are known for their superior potential which should be nurtured steadily to avoid potential decay (Dada and Obi, 2015). Clark and Shore (2004) cautioned on widening the gap of underachievement through poor emotional dispositions that could result from the inability to express or optimise their precocity. Intellectually and emotionally safe environments enable gifted children to achieve optimally and increase their physical and mental well-being (Schwartz, 2013). The experience of the lockdown occasioned by COVID-19 is however contrary to the principle of a safe environment because it poses stressors such as boredom, fear of infection, poor exploration, and anxiety of a range of psychological consequences.

Isolation is one cause of depression for gifted students that has heightened the concern of parents and educators. Gifted students through isolation may deteriorate gradually towards losing motivation, energy, and commitment to go on academically and lose self-actualisation. Dada and Fagbemi (2015) reported that if the environment at home or school is too restrictive it becomes a problem. During the COVID-19, Lack of creativity impact on a gifted child, and the child eventually becomes depressed. In a similar vein, circumstances similar to Covid-19 have suggested a poor impact on the well-being of students and young people (Egaga, Dada and Fagbemi, 2015). Understanding these background factors is crucial for all education stakeholders. It is against this backdrop that this study was conducted to determine the impact of school closure and isolation (occasioned by Covid-19 pandemic) on the psychological wellbeing of gifted children.

Research Questions

The following are the research questions that guided the study:

1. How do selected psychological indices impact the well-being of gifted students amid COVID-19?
2. What pattern of relationship exists among school closure, social distancing, and psychological well-being?
3. Is there a significant impact of school closure and social distancing on the psychological well-being of gifted students?

Methodology

A descriptive survey research design was adopted for the study. Sixty-seven students already identified as gifted were randomly selected across three states of southwest Nigeria as participants in the study. The instruments used for the study are: (i) Mathematics Achievement Test (MAT). (ii) Adapted Ryff's Psychological Well-being Scale (PWBS, 1999) and (iii) Social Isolation and School Closure Impact Assessment Scale (SISCIAS-20) developed by the researchers.

The MAT was constructed by the researchers, and consisted of 10 items that measured accuracy and critical thinking. The MAT was an instrument to detect the gifted JSS III students in the intact classes of the sampled schools, it was trial tested on forty JSS III students of Osogbo Grammar School, Osogbo. The class teachers of Mathematics in the school ascertained that the items satisfied the content validity of the Mathematics scheme of work already covered. Test retest reliability approach was adopted to ascertain the consistency of the item response, the result yielded $r=0.76$. The adapted PWBS has 42 items that bother on the perceived psychological well-being of the gifted child. The PSBW adopted 4-response option scales. The instrument indices of the scale such as autonomy, environmental mastery, personal growth, positive relations, purpose in life and self-acceptance relates well to the psychological well-being of gifted students. Therefore, the adapted version of the instrument captured the six indices aforementioned. Participants were requested to select any of the options provided to indicate their psychological well-being. The original Cronbach Alpha reliability of PWBS is 0.74 while the adapted scale is 0.71. The SISCIAS-20 has 20 items, Section A consist of 8 items that bother on personal information of the respondents and also probe into social distancing while Part B consist of 12 items solicited for information on school closure. The SISCIAS adopted a 4-Likert scale format of response and has a test-retest reliability coefficient of 0.69. It elicited responses from gifted students on the impact of social distancing and school closure during Covid-19. Data collected was analysed using Pearson Moment Correlation, t-test and Multiple Regression Analysis.

Results: The results obtained from data analysis were presented according to research questions.

Research question 1: How do selected psychological indices impact the well-being of gifted students amid covid-19?

Table 1: Mean and standard deviation of selected psychological indices on the well-being of gifted students amid covid-19

S/N	Indices of psychological well-being	N	Mean	Std. Deviation	Remark
1	Anxiety over uncompleted task	67	2.93	1.020	Negative Impact
2	Loss of interest in tasks	67	2.82	1.014	Negative Impact
3	Feeling of health insecurity	67	2.87	.983	Negative Impact
4	Fear of contacting Covid-19	67	2.79	1.081	Negative Impact
5	Worries over leisure time	67	2.93	.910	Negative Impact
6	Mental stiffness	67	2.94	1.013	Negative Impact
7	Signs of boredom	67	3.06	.919	Negative Impact
8	Poor emotional coordination	67	2.84	.979	Negative Impact
9	Symptoms of depression	67	3.03	.904	Negative Impact
10	Drop in academic motivation	67	3.09	.965	Negative Impact
11	Over sleeping	67	3.10	1.002	Negative Impact
12	Drop in attention to task	67	2.96	.895	Negative Impact
Valid N (listwise)		67			

Table 1 presents the results of the mean and standard deviation of psychological indices of interest on the well-being of gifted students amid the covid-19 pandemic. Twelve (12) different psychological factors of interest were measured in the study. For each psychological index, the table displays the number of respondents (N), the mean score, and the standard deviation (Std. Deviation). The mean represents the average score for each psychological index, while the standard deviation indicates the variability of responses within the sample.

Furthermore, the table includes a remark column that states the impact of each psychological factor on the well-being of gifted students. According to the remark column, all the psychological indices hurt the psychological well-being of gifted students amid the COVID-19 pandemic. Table 1 provides a summary of the psychological indices and their respective impact on the well-being of gifted students during the pandemic. It suggests that these factors have detrimental effect on the psychological well-being of gifted students because they were found to hurt the psychological well-being of gifted students.

Research question 2: What patterns of relationship exist among school closure, social distancing, and psychological well-being?

Table 2: Correlation Matrix of social distancing, school closure and psychological wellbeing of gifted students

Variables	Psychological wellbeing	School closure	Social distancing
Pearson Correlation			
Psychological wellbeing	1.000	.530*	.471*
School closure	.530*	1.000	.768*
Social distancing	.471	.768*	1.000

Table 2 presents the Correlation Matrix of school closure, social distancing, and psychological well-being of gifted students. This correlation matrix shows the relationship between school closure, social distancing and the psychological well-being of gifted students. The values in the table represent the Pearson correlations between each pair of variables. The correlation coefficient ranges from -1 to +1. A positive correlation indicates that as one variable increases, the other variable also tends to increase. A negative correlation indicates that as one variable increases, the other variable tends to decrease. The closer the correlation coefficient is to +1 or -1, the stronger the relationship between the variables. In this study, there is a positive correlation between social distancing and psychological well-being ($r=0.471$). This suggests that as social distancing increases, psychological well-being also tends to increase among gifted students. There is also a positive correlation between school closure and psychological well-being ($r=0.530$). This suggests that as school closure increases, psychological well-being also tends to increase among gifted students. Furthermore, there is a strong positive correlation between social distancing and school closure ($r = 0.768$). This indicates that as social distancing increases, school closure also tends to increase among gifted students. All of these correlations are statistically significant at the 0.05 level of significance, meaning that the relationships observed are unlikely to have occurred by chance. Therefore, it can be inferred that social distancing and school closure have a positive relationship with the psychological well-being of gifted students. This suggests that the implementation of social distancing measures and school closure may have a positive impact on the psychological well-being of gifted students. However, it is important to note that correlation does not imply causation and further research is needed to determine the direction and underlying mechanisms of these relationships.

Research question 3: Is there any significant impact of school closure and social distancing on psychological wellbeing of gifted students?

Table 3: t-test of Beta weight analysis of impact of social distancing and school closure on psychological wellbeing of gifted students**Coefficients^a**

Model		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta	t	Sig
1	(Constant)	16.198		3.880	4.174	.000
	Social distancing	.283	.300	.155	.944	.349
	School closure	.790	.316	.411	2.503	.015

***Significant at 0.05**

a. Dependent Variable: Psychological wellbeing

Table 3 presents the t-test of Beta weight analysis of the impact of social distancing and school closure on the psychological well-being of gifted students. The constant coefficient is 16.198. This means that when the independent variables are equal to zero (i.e., no social distancing and no school closure), the predicted psychological well-being score is 16.198. The coefficient for social distancing is 0.283. This indicates that for every one-unit increase in social distancing, the predicted psychological well-being score increases by 0.283. However, this coefficient is not statistically significant ($p = 0.349$), suggesting that social distancing may not have a significant impact on psychological well-being. The coefficient for school closure is 0.790. This means that for every one-unit increase in school closure, the predicted psychological well-being score increases by 0.790. This coefficient is statistically significant ($p = 0.015$), suggesting that school closure does have a significant impact on psychological well-being. The standardised coefficients (Beta) indicate the relative importance of each independent variable in predicting the dependent variable. In this case, school closure (Beta= 0.411) has a higher standardised coefficient compared to social distancing (Beta = 0.155), suggesting that school closure may have a stronger impact on psychological well-being compared to social distancing.

Table 4: ANOVA of the impact of social distancing and school closure on the psychological well-being of the gifted childModel: $R=.539$, $R^2=.291$

		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1191.06	2	595.54	13.135	.000 ^b
	Residual	2901.66	64	45.33		
	Total	4092.72	66			

- a. Dependent Variable: Psychological wellbeing
- b. Predictors: (Constant), School closure, Social distancing

Table 4 presents the result of ANOVA of the impact of social distancing and school closure on the psychological well-being of the gifted child. The model was able to explain 29.1% (R²) of the variance in psychological well-being. The correlation coefficient (R) for the model is 0.539, indicating a moderately strong positive relationship between the predictors (school closure and social distancing) and psychological well-being. The analysis of the variance table shows that the regression model is statistically significant as indicated by the F-statistic of 13.135 with a significance level of .000. The regression equation for the model is Psychological wellbeing = Constant + (Coefficient for School closure * School closure) + (Coefficient for Social distancing * Social distancing). The constant term represents the expected value of psychological well-being when both school closure and social distancing are zero. The predictors, school closure and social distancing, have individual coefficients that represent the amount of change in psychological well-being associated with a one-unit increase in each predictor, holding all other predictors constant. This implies that school closure and social distancing have a strong impact on the psychological well-being of gifted students in Nigeria.

Discussion

It was found that school closure and social isolation when put together resulted in the poorer and lower psychological well-being of students. Brooks, Webster, Smith, Woodland, Wessely, Greenberg and Rubin (2020) also reported similar findings when they found that quarantine and social isolation worsen the psychological well-being of students with special needs, particularly for those who have sensitive characteristics which parents do not pay attention to. The finding also agrees with that of Schwartz (2013) that intellectually and emotionally safe environments enable gifted children to achieve optimally and increase their physical and mental well-being. The experience of the lockdown occasioned by COVID-19 is however contrary to the principle of a safe environment because it poses stressors such as boredom, fears of infection, poor exploration, and anxiety of a range of psychological consequences. Gifted students possess exceptional abilities and potential that sets them apart from their peers. These students often display high levels of intelligence, creativity, and talent in various domains such as academics, arts, music, or sports.

However, it is important to note that this potential can diminish or decay if not properly nurtured and supported. One of the main reasons why nurturing gifted and talented students are crucial is to prevent potential decay. These students have unique learning needs that require appropriate challenge and stimulation. If they are not provided with opportunities to further develop their abilities, they may become disengaged, bored, or frustrated with their education, which can lead to a decline in motivation, performance, and overall potential. Thus, the gifted require teachers that carry specific skills, such as the ability to analyze individual interests and learning styles (Miedjensky, 2018). Furthermore, the potential decay of gifted and talented students can also result from a lack of social-emotional support. These students may struggle with feelings of isolation, perfectionism, or

intense pressure to succeed. Without proper guidance and support, they may experience emotional distress or even develop mental health issues, leading to a decline in their overall well-being and potential. Nurturing gifted students involves providing them with an enriched learning environment that challenges, stimulates, and supports their unique abilities. This can be achieved through a variety of strategies, such as individualised education plans, accelerated or advanced coursework, mentorship programmes, and extracurricular activities that cater to their specific interests.

This study also found that social distancing and school closure have a positive relationship with psychological well-being among gifted students. This suggests that the implementation of social distancing measures and school closures may have a negative impact on the psychological well-being of gifted students. This finding confirmed Duraku and Hoxha's (2020) claims that most children during the period of isolation have had a sleep disorder, felt stressed, scared, anxious, upset, worried, depressed, lonely, have been less tolerant, and have lost patience more easily. This 2020¹ study reported that parents made comments that children are stressed, scared, worried, bored, concerned, desperate, impatient, and lonely, the study attributed all these negative effects to the fact that the children were missing peers, missing family members, too much free time, not being able to engage in regular activities because of the absence of physical contact. Although, the situation later brought some positive changes as the children were coping with isolation. Isolation improved technological use (video games, social media), activities with the family sports activities in the yard, studying favourite topics of interest (outside of the school curricula) reading, drawing practicing new skills (cooking).

This study found that school closure and social isolation correlate significantly with students' low psychological well-being. This finding corroborates that of Sahu (2019) who studied the closure of universities due to coronavirus disease and found that closure correlates significantly with low psychological wellbeing of the students. Thus it could be explained that school closure and social isolation which are some of the core practice aimed at reducing the spread of COVID-19 are capable of affecting the psychological well-being of gifted students.

It was also found that school closure and social isolation affect the psychological well-being of the participants. This finding is not strange as Idowu, Olawuyi and Nwadioke (2020) who investigated the impact of COVID-19 pandemic on the psychological well-being of students in a Nigerian university also reported similar findings. This is because gifted students are already used to their school friends and peers who understand and are of similar characteristics. Since adults at home may not understand them the way their peers do, gifted students feel free among their school peers. It should be noted that the isolating conditions that these students are already used to during the pandemic can affect the relationship between the peers when school is open. This may be an effect of social isolation on the gifted students as their gifted peers may continue to isolate from them.

Conclusion

In conclusion, nurturing the potential of gifted students is vital to prevent potential decay. By providing them with appropriate academic and social-emotional support, these students can

continue to thrive and reach their full potential. This is not only the benefits of the individuals themselves but also society as a whole, as gifted individuals can make significant contributions in their chosen fields. By offering these students appropriate educational opportunities, they can continue to develop their potential, build upon their strengths, and explore new areas of interest. Additionally, nurturing the social-emotional well-being of gifted students is crucial.

Recommendations

Given the findings, it is recommended that the school should partner with parents of gifted and talented students in providing a stimulating and challenging home environment that is psychologically safe and helpful for the gifted students. Online counselling service is imperative for gifted students and their parents to improve their psychological well-being. There is a need to provide them with a supportive network of peers, mentors, and counsellors who can help them navigate the challenges they may face and maintain a positive outlook on their abilities and achievements. Schools should also employ teleconferencing and motivation for academic tasks for gifted and talented students to stabilise their psychological well-being. Students should try to explore new interests and develop talents. There are a series of everyday activities like playing, reading and using educational websites, moreover, they can engage in music lessons or sports camps to take care of their hyperactivity in such situations.

References

Acheampong, J.O. (2023). The impact of COVID-19 on students' academic performance: The case of the university of Ghana business school. *Computer Education*, Vol.10, Issue 1.

Akintunde, D.O. and Fagbemi, O.O. (2014) Education of the Gifted/Talented Students in Nigeria: A Justification. *Journal of Education and Practice* www.iiste.org ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.5, No.33, 2014.

Al-Maskari, A., Al-Riyami, T. and Kunjumuhammed, S. K. (2022). Student's academic and social concerns during the COVID-19 Pandemic. *Education and Information Technologies*, Volume 27, pages 1–21 (2022).

Aristovnik, A., Keržič, D., Ravšelj, D., Tomažević, N. and Umek, L. (2020). Impacts of the COVID-19 pandemic on the life of higher education students: A global perspective. *Sustainability*, 12(20), 8438.

Arowoshola, L. (2020). "Medical education engagement during the COVID-19 era—a student parents perspective," *Medical Education Online*, vol. 25, no. 1, Article ID 1788799, 2020.

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N. and

Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *Lancet* 395, 912-920.

Clark, B. and Shore, R. (2004). *Emotional Adjustment of Gifted Students in Regular School.* (12th ed) Englewood Cliffs, N. J: Morrill/Prentice Hall.

Cifuentes-Faura, J., Obor, D. O., To, L. and Al-Naabi, I. (2021). "Cross-cultural impacts of COVID-19 on higher education learning and teaching practices in Spain, Oman, Nigeria and Cambodia: a cross-cultural study," *Journal of University Teaching and Learning Practice*, vol. 18, no. 5, pp. 135–151.

Dada, O. A. and Obi, F. B. (2015). Managing gifted students with behavioural problems in school. *Special Needs Education*, 1, 14-28

Dada, O. A. and Fagbemi, O. O. (2015). Home and school factors as predictors of creativity among high achieving students in Ibarapa, Oyo State, Nigeria. *African Journal of Vocational Education*, 5(1), 61-72.

Dennon, A. (2022). Coronavirus Deepens the Digital Divide for College Students

Duraku, Z.H. (2020). The impact of COVID-19, school closure, and social isolation on 159 gifted students' well-being and attitudes toward remote (online) learning

Ebohon, O., Obienu, A. C., Irabor, F., Amadin, F. I. and Omoregie, E. S. (2021). Evaluating the impact of COVID-19 pandemic lockdown on education in Nigeria: Insights from teachers and students on virtual/online learning. *Bulletin of the National Research Centre* volume 45, Article number: 76 (2021)

Egaga, P. I., Dada, O.A. and Fagbemi, O. O. (2015). Socio-personal factors as predictors of psychological adjustment of exceptional child in Ibadan, Nigeria. *European Scientific Journal*, 11(23), 395-409

Filho, W. L., Wall, T., Rayman-Bacchus, L., Mifsud, M., Pritchard, D.J., Lovren, V. O., Farinha, C., Petrovic, D. S. and Balogun, A. (2021). Impacts of COVID-19 and social isolation on academic staff and students at universities: a cross-sectional study. *BMC Public Health* volume 21, Article number: 1213 (2021)

Gagné, F. (2010) 'Motivation within the DMGT 2.0 framework.' *High Ability Studies*, 21 (2), pp. 81–99. 10.1080/13598139.2010.525341.

Idowu, A., Olawuyi, D. A. and Nwadioke, C. O. (2020). Impacts of covid-19 pandemic on the psychological well-being of students in a Nigerian University. *Journal of Medical and Surgical Research*, 7(1), 798- 806.

Kaya, F. and Islekeller-Bozca, A. (2021). Experiences of gifted students during the COVID-

19 pandemic in Turkey. *Gifted Education International. Sage Journals*, Vol.38, Issue 1
https://doi.org/10.1177_02614294211069759

Klasen, J. M. Meienberg, A. and Bogie, B. J. M. (2021). Medical student engagement during COVID-19: lessons learned and areas for improvement, *Medical Education*, vol. 55, no. 1, pp. 115–118.

Kuhfeld, M., Soland, J., Tarasawa, B., Johnson, A., Ruzek, E., & Liu, J. (2020). Projecting the potential impact of COVID-19 school closures on academic achievement. *Educational Researcher*, 49(8), 549–565. <https://doi.org/10.3102/0013189X20965918> (Google Scholar)

Kuhfeld, M., Soland, J., Lewis, K. and Morton, E. (2022). The pandemic has devastating impacts on learning. What will it take to help students catch up? www.brookings.edu.

Lung, L. (2022). Factors Affecting the student performance during the COVIS-19 Pandemic. *Open Journal of Social Sciences*, 10, 410-425. doi: 10.4236/jss.2022.107032

Miedjensky, S. (2018). Learning environment for the gifted—What do outstanding teachers of the gifted think? *Gifted Education International*, Vol. 34(3) 222–244.

Okagbue, E. F. Ezeachikulo, U. P ; Nchekwubemchukwu I S Chidiebere, I E; Obisoanya, K. Ouattaraa, C.A.T. and Nwigwe, E. O. (2022). The effects of Covid-19 pandemic on the education system in Nigeria: The role of competency-based education. *Int J Education Res Open*. 2023; 4: 100219. doi: 10.1016/j.ijedro.2022.100219

Pfeiffer, S. I., Shaunessy-Dedrick, E. E. and Foley-Nicpon, M. E. (2018). *APA Handbook of Giftedness and Talent*, (pp. 1–691). Washington, DC: American Psychological Association.

Rwigema, P. (2021). Impact of COVID-19 lockdowns on the education sector. The case of Rwanda. *The Strategic Journal of Business & Change Management*, 8(1), 150.

Ryff, C. D. (1999). The contours of positive human health. *Psychological Inquiry*, 9, 1-28.

Safi'i, A., Muttaqin, I., Hamzah, N. Chotimah, C., Junaris, I. and Rifa'i, M.K. (2021). The effect of the adversity quotient on student performance, student learning autonomy and student achievement in the COVID-19 pandemic era: evidence from Indonesia, *Helijon*, vol. 7, no. 12, Article ID e08510.

Sahu, P. (2019). Closure of universities due to coronavirus disease in 2019 (COVID-19): Impact on education and mental health of students and academic staff. *Cureus*, 12(4), 49-57.

Samsen-Bronsveld, H. E., Van der Ven, S. H. G., Speetjens, P. P. A. M. and Bakx, W. E. A. (2022). Impact of the COVID-19 lockdown on gifted and non-gifted primary school

students' well-being and motivation from a self-determination perspective. *Journal of Research in Special Educational Needs*. Nov 1 : 10.1111/1471-3802.12583. doi: 10.1111/1471-3802.12583

Schwartz, G. R. (2013) Psychological effects of the COVID-19 outbreak and lockdown among students and workers of a Spanish university. *Psychiatry Res.*, 12 (2), 1-13.

Shibu, A. (2021). Medical student engagement during the COVID-19 pandemic—a student perspective. *Medical Education*, vol. 55, no. 6, p. 768.

UNICEF, (2020). Unequal access to remote schooling amid COVID-19 threatens to deepen global learning crisis <https://en.unesco.org/covid19/educationresponse>

Zhai, Y. and Du, X. (2020). Addressing collegiate mental health amid COVID-19 pandemic. *Psychiatry Res.*, p. 113003.