



Psychosocial impact of COVID-19 on achievement of adolescents with hearing impairment in English language

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ABSTRACT

This study examined psychosocial impact of Covid-19 on the achievement of secondary school adolescents with hearing disabilities in English Language in Lagos State. A survey research design was employed with population of hearing-impaired adolescents. A sample of hundred adolescents with hearing impairment was selected for the study using purposive sampling technique to select the participants and simple random sampling to select four schools practicing inclusion. The instruments for data collection were ELAT (English Language Achievement Test) and Psychosocial Scale (PSS) with reliabilities of 0.69 and 0.79 respectively. Pearson Product Moment Correlation Coefficient and Multiple Regression were used to analyse data collected. The hypotheses formulated were tested at 0.05 level of significance. The results of the four hypotheses tested revealed that aggression, self-esteem and communication have positive relationship to the academic achievement of the hearing-impaired adolescents in English Language as a result of Covid-19. Further findings discovered that there was a combined effect of aggression, self-esteem and communication on academic performance of secondary school adolescents with hearing impairment in English Language. Therefore, teaching methodology should be more of cooperative learning approach to motivate sense of belongings and friendliness of adolescents with hearing impairment in Lagos State.



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Covid-19 has impacted on all aspects of lives since its discovery in December 2019. Academic activities have not been left out as its processes have been influenced because of various constraints, protocols and principles to stem the tide of rapid spread and its attendant morbidities. The potential

long-term damage to the educational, individuals and groups could be unimaginable. This is because academic activities have been moved from face-to-face interaction to online with a lot of trial and errors and uncertainty. Teaching, learning and assessment via digital mode become onerous most especially in low-income countries. These have led to severe interruption in teaching, learning and assessment with assumed long-term consequences of unimaginable inequality (Burgess & Sievertsen 2020).

Findings have emerged that the effect of Covid-19 pandemic is alarming (The Commonwealth, 2021). The danger of inequality leads to the disregard of rights and diminishes the quality of life. Almost more than a year of protocols, anguish, isolation, rules, and uncertainty has presented a serious challenge on many students' mental health, compounding the tasks students face in the classroom, whether physical or online (Kidman, et al., 2021). UNESCO postulates that about 1.25 billion students have been negatively impacted by the pandemic, leading to a serious challenge to the achievement of sustainable development goal four (SDG 4) (Solberg and Akufo-Addo 2020). Among these 1.25 billion students are students with hearing impairment whose academic challenges could have been compounded because of the dimension and new system of teaching and learning. The attendant effects could evidently reflect on socio-psychological cum academic behaviour of these groups of students.

Assessments of the effect of Covid-19 have significantly reflected on the learning achievement of the hearing-impaired students during the post Covid-19 era compared to pre-Covid-19 period. As students suffered through the pandemic period, in the same way reflected in their learning. In the fall of 2020, though, many students appeared to have made gains from the previous year according to US Department of Education (2021). However, going by McKinsey Teacher Sentiment Survey as reported by Chen et al. (2021), in the United States, teachers reported that students lag behind with 2.4 months expected milestones in November, 2020 while October it was found that students were 1.5 months behind in reading levels and 3 months behind in mathematics skills. In Australia, local teacher findings after their assessment suggested students have over a month of loss with total of 1.6 months. In the United Kingdom, it was reported 3 months of learning loss in July 2020. The reports on students' academic performance did not isolate learners with hearing impairment who might have suffered double jeopardy because of their circumstances. Students in poor and middle-income countries especially learners with special needs could be hard hit owing to longer duration of school shutdowns where governments demonstrated less concern and weak capacity to roll out remote learning.

Studies have revealed that students with hearing impairment suffer academic gap compared to their non-hearing-impaired counterparts (Ogundiran & Olaosun, 2013; Suman, 2019). The factors contributing to this have been linked to the impact of deafness, communication barrier, lack of understanding and adequate knowledge of teachers, poor parental concern and academic environment (Adeniyi & Kuku, 2018; Adeniyi & Lawal, 2019). This has motivated educators and teachers of students with hearing loss to have engaged different strategies in form of pedagogies and therapies aim at improving the learning and achievement of students with hearing loss. Indeed, hearing loss and spoken language are parts of the major issues affecting communication, interaction, and engagement of children with hearing loss and the community (Kermit, 2019). Lack of oral communication significantly affects students with hearing impairment. Unfortunately, the Covid-19 era has impacted negatively on socio-cognitive dispositions of human being across races, social strata, economic and education. Protocols put in place to mitigate the spread, such as social distancing and restriction to man's interactions could have negatively influenced self-esteem of many, widen gap of interaction in form of communication, and increase anxiety that may spike aggression among people. It can be observed that Covid-19 would significantly affect the communication ability of students with hearing loss that has hitherto impaired due to lack of significant language and vocabulary development. However, report has indicated that Covid-19 has increased mutual interaction between students with hearing loss and their relations. Ramadhana, et al. (2020) found that rearing of children with hearing disabilities in the family during the COVID-19 era has helped mutual interaction and attachment and has created a better interface that initiated a good understanding of the function of family, care and affection. This can help in reducing the stress face by children with hearing impairment who seemed to have been neglected in family affairs. Although, Covid-19 may increase family ties and mutual interactions between children with hearing loss and their families, the learning- at-home concept carried out remotely with the assistance of online technology during this period and the challenges frequently linked to technical difficulties that can hinder the learning process (Favale, et al., 2020), may make them to not feel comfortable learning online and feel frustrated (Singh & Thurman, 2019).

Literature have revealed that Covid-19 poses challenge on mental health of the students (Kidman, et al., 2021), reduce learning achievement because of sudden change in classroom activities and dimension from physical interaction to online engagement most especially in low income countries like Nigeria because of separation from their teachers and friends (Huber, & Helm, 2020; Leeb, et al., 2020), limit level of communication because non-physical interaction during online learning and impact

negatively on their self-esteem. This may adversely affect socialisation of some students whose their social activities have been limited because of some levels intra personal challenges. In the US for instance, the National Education Association argues that children in the elementary school need the classroom experience and atmosphere as they are more likely to communicate and interact with one another or their teachers through face-to-face contact compared to online (Di Pietro, et al., 2020). Lack physical interaction may negatively affect communication among learners which may adversely affect their socio-cognitive achievement. It has been reported that hearing impaired children risk lower self-esteem because of their differences with their counterparts without hearing loss relative to communication skills, physical appearance, interaction, and social maturity (Adeniyi & Oluokun, 2022; Warner-Czyz, et al., 2015).

Self-esteem is highly essential for life achievement as it affects the total wellbeing of anybody. Mtuli (2015) observed that the vulnerability of learners that are hearing impaired included low self-esteem, poor social adjustment, psychological problems, emotional disturbances, and low self-concept which can negatively affects their personality and consequently make interpersonal relationships difficult. It can then be inferred that once personality is affected, learning will be negatively influenced, and the learning products will be endangered. Arguably, learners with hearing impairment have demonstrated different types of self-esteem due to environment. While literature revealed that students with hearing impairment in special school exhibits moderate self-esteem because of no significant contrast line among themselves, students with hearing impairment attending mainstream or inclusive schools may demonstrate low self-esteem because of the perceived differences between them and learners without hearing impairment (Van Gurp, 2001). Exhibiting different self-esteem because of the nature of environment makes one to conclude that children with hearing loss have self-esteem difficulty, this then open debate in line of psychotherapy and social inclusion.

Students with hearing loss are considered to be aggressive because of their adverse reaction to situation considered to be contrary to their social inclusion (Huber, 2005; Robins, et al., 2002), though non-hearing impaired may also react in the same way due to unmet and unachievable goal by demonstrating frustration that may exacerbate some behaviours that are detrimental to self or other in the environment (Kolo & Yaroson , 2014) but the frequency of exhibiting this negative temperament occur more frequently among people that are hearing impaired. One of the significant ways of reacting to frustration by many students with hearing loss is aggression. Aggression is the exhibition of pervasive, violent, and inimical behaviour capable of harming others. Students with hearing loss may react aggressively because of the perceived separation from the hearing world because of

frustration experience in coping with the world around him. Studies have reported that hearing impaired children demonstrate more aggressive compared to their counterparts without hearing disabilities (Rostami, et al., 2014; Van Gent, et al., 2011), this was linked to negative self-esteem, loneliness, and occasional depression as a result of their auditory disadvantage (Adeniyi et al., 2021). Babaroglu (2016) did a study on the effect of deafness on aggression among children comparing children with and without hearing loss, it was found that children with hearing impairment demonstrate aggressive behaviour compared to their peers without hearing loss. This characteristic may affect the level of interaction and negatively impact on academic achievement. Al Majaji and Alghazo (2021) carried out a study on mental health of the people with hearing loss during Covid-19 measuring depression, anxiety, aggression, and fear. It was found that people with hearing impairment constitute a vulnerable proportion of the population with a spike in their mental health problems. The implication is that Covid-19 could have increased the aggressive tendency of individuals with hearing impairment due to a lot of protocols and absence from physical class that make interaction with their peers limited.

Going by the reported negative influence of Covid-19 on the non-disabled students in peri and post Covid-19 era, it becomes expedient to examine the influence of Covid-19 on some social and psychological constructs that influence academic achievement among adolescents' learners with hearing impairment in Nigeria. This is because these groups of learners are not immune from both clinical and social impacts of the pandemic and most importantly Covid-19 might be another era to inflict unimaginable impact on the academic achievement due to some psychological and social restraints occasioned by numerous protocols during the pandemic period. Therefore, this study examined psychosocial impact of Covid-19 on academic achievement adolescents that are hearing impaired in English language in some inclusive schools in Lagos State.

Hypotheses

1. Aggression does not significantly relate to academic achievement of secondary school adolescents with hearing impairment in English Language among due to Covid-19.
2. Self-esteem does not significantly relate to academic achievement of secondary school adolescents with hearing impairment in English Language due to Covid-19.
3. There is no significant relationship between communication and academic achievement of secondary school adolescents in English Language due to Covid-19

4. Aggression, self-esteem, and communication do not jointly influence achievement of secondary school adolescents in English Language due to Covid-19.

METHOD

Research Design

This study employed descriptive survey design. This method was used because it enables the researchers to collect data, analyse the data and interpret the data from a representative of the population to generalize the psychosocial impact of COVID-19 on academic achievement of adolescents with hearing impairment in secondary schools in Lagos state. The population were adolescents with hearing loss in secondary school in Lagos State. Lagos State has over 20 inclusive schools. This study used a sample of 100 hearing impaired students. The participants were selected through purposive sampling while simple random sampling technique of hat and draw method was used to select four inclusive secondary schools.

Instruments and Procedures

Survey questionnaire

English Language Achievement Test (ELAT) and Psychosocial Scale (PSS) were the instruments used to collect data. ELAT was a 20-item multiple choice test on English language.

The PSS was adapted from the Rosenberg Self Esteem Scale developed by Rosenberg (1965), The Buss-Perry Aggression Questionnaire developed by Arnold Buss and Mark Perry (1992) and Self-Assessment Communication Survey researchers. The PSS had 46 items and Parts A and B. Part A was used to gather demographic information of the respondents while the Part B centred on the request for the respondents to fill out in response to answering the research questions posed in this study. The response format for Section B of the PSS was a 4-point Likert type response format of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). Copies of the PSS were validated using content validity carried out by five colleague researchers. The researchers ensured that the variables in the research questions/hypotheses were adequately represented in the PSS. To ascertain the reliability of the PSS, a trial test was carried out. Twenty (20) copies of the PSS and ELAT administered to respondents in one of the inclusive schools that were not part of the main study. A test retest was carried out with two weeks interval to determine the stability of the PSS. The scores generated were analysed using Pearson Product Moment Correlation Coefficient. The reliability coefficient of 0.79 and 0.69 were realised respectively.

Data Analysis Procedures

The PSS and ELAT were administered by the researchers to the respondents in each school after initial interactions with the respondents. The responses were collected immediately after the participants have adequately attended to the different scales and ELAT test. The data was collated and analysed using descriptive statistics, Pearson Product Moment Correlation Coefficient and Multiple Regression.

FINDINGS

Hypothesis 1: Aggression does not significantly relate to academic achievement of secondary school adolescents with hearing impairment in English Language among due to Covid-19.

Table 1. Inferential Analysis on Aggression and Achievement in English Language

Variables	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>df</i>	<i>r</i>	<i>P</i>
Aggression	100	22.14	4.29	99	.209	0.037
Achievement in English Language	100	5.8	2.05			

Figure from Table 1 a correlation coefficient (*r*) of .209 ($p < 0.05$) as the relationship between aggression and academic achievement of secondary school adolescents with hearing impairment in English Language due to Covid-19. This shows that there exists a positive relationship between aggression and achievement in English Language. This means that aggression and performance in English Language rise or fall in the same direction. Besides, the null hypothesis was rejected in lieu of the alternative hypothesis. It was concluded that aggression and achievement in English Language had positive and significant relationship among secondary school adolescents with hearing impairment due to covid-19.

Hypothesis 2: Self-esteem does not significantly relate to academic achievement of secondary school adolescents with hearing impairment in English Language due to Covid-19.

Table 2. Inferential Analysis on self-esteem and Academic Achievement

Variables	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>df</i>	<i>r</i>	<i>p</i>
Self-Esteem	100	25.01	4.07	99	.325	0.001
Achievement in English Language	100	5.8	2.05			

Analysis from Table 2 shows that a correlation coefficient of .325 ($p < 0.05$) was derived as the relationship between self-esteem and achievement in English Language among secondary school adolescents with hearing

disabilities due to covid-19. A positive relationship exists between self-esteem and achievement. Both self-esteem and achievement rise or fall together. Also, the relationship was observed to be significant, and it was concluded that self-esteem does not significantly relate to academic achievement of secondary school adolescents with hearing impairment in English Language due to Covid-19.

Hypothesis 3: There is significant relationship between communication and academic achievement of secondary school adolescents with hearing impairment in English Language.

Table 3. Inferential Analysis on communications and Academic Achievement

Variables	N	Mean	SD	df	r	p
Communication	100	27.87	4.21	99	.145	0.151
Achievement in English Language	100	5.8	2.05			

A correlation coefficient of .145 ($p < 0.05$) was computed as the relationship between communication and academic achievement of secondary school adolescents with hearing impairment in English Language due to covid-19. A positive relationship was observed between communication and achievement in English Language. This mean as communication rise or fall, it will lead to a similar change in achievement in English Language. However, the changes were observed to be insignificant. It was concluded that communication and achievement in English Language do not significantly relate among secondary school adolescents with hearing impairment due to Covid-19.

Hypothesis 4: Aggression, self-esteem and communication do not jointly influence achievement of secondary school adolescents in English Language due to Covid-19.

Table 4. Model Summary

Model	R	R Square	Adjusted R Square
1	.357 ^a	.127	.100

a. Predictors: (Constant), Communication, Aggression, Self-Esteem

Indication from Table 4 shows that 35.7% as the quality of prediction of achievement in English Language. Also, 12.7% from the Table represent the proportion of variance in achievement in English Language as explained by communication, aggression and self-esteem. The joint contribution of the communication, aggression and self-esteem on the achievement in English

Language is presented in Table 5.

Table 5: ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	52.953	3	17.651	4.667	.004 ^b
	Residual	363.047	96	3.782		
	Total	416.000	99			

a. Dependent Variable: Achievement in English Language

b. Predictors: (Constant), Communication, Aggression, Self-Esteem

A F-calculated value of 4.667 was computed as a joint contribution of communication, aggression and self-esteem on achievement in English Language. This shows that the joint contribution is significant since the F-calculated value is greater than the critical value of 3.09 given 3 and 96 degrees of freedom at 0.05 level of significance. As a result, the null hypothesis was rejected. Thus, the alternative hypothesis which states that aggression, self-esteem and communication jointly influenced achievement of secondary school adolescents with hearing impairment in English Language was accepted.

Table 6. Coefficient Analysis

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.271	1.821		-.149	.882
	Aggression	.064	.049	.134	1.324	.189
	Self-Esteem	.133	.053	.262	2.528	.013
	Communication	.047	.048	.097	.984	.328

a. Dependent Variable: Achievement in English Language

Values from Table 6 shows that achievement in English Language positively relative with aggression ($\beta = 0.134$; $p > 0.05$), self-esteem ($\beta = 0.262$; $p < 0.05$) and communication ($\beta = 0.097$; $p > 0.05$). The computed values show that only self-esteem has significant positive relative relationship with achievement in English Language.

DISCUSSION

The findings revealed that aggression had positive relationship and significantly related to academic achievement of secondary school

adolescents with hearing impairment in English Language due Covid-19 in Lagos State, Nigeria. From the outcome of the study, the increase in aggressive disposition to learning could be attributed to the fear that students with hearing impairment may not want to suffer further academic gap which they have hitherto experienced because of the gap in communication and some intrapersonal variables. The disposition to learning during Covid-19 could have influenced performance outcome in English Language among secondary school adolescents with hearing loss during Covid-19. The finding ran contrary to the study by Kidman, et al., (2021) who lamented that more than year of grief, isolation, rules, protocols and uncertainty has serious negative impact many students' mental health, complication the tasks the students face in the classroom, whether online or offline.

The study again revealed that self-esteem significantly related to achievement in English Language among adolescents with hearing loss during Covid-19 era. This result indicated that there was negative impact of Covid-19 pandemic and the attendant rules and regulation that guided the spread on the psychological constructs of the hearing-impaired adolescents which present multiplying effects on the academic achievement of this group of individuals. The negative impact of Covid-19 is because of threat of inequality that leads to the dereliction of rights and detracts the quality of life as reported by (The Commonwealth, 2021; Kidman, et al., 2021).

The results further revealed that there was positive correlation between communication and achievement in English Language among the hearing-impaired adolescents but no significant relationship between the two variables. The non-significance relationship was exacerbated by sharp drop in communication and interaction during the period of Covid-19 because of the regulation placed on social interaction. This has its attendant impact on communication among adolescents with hearing impairment which had been hitherto found to be poor as reported by research finding and literature. This result may not reflect the report of Leeb, et al., (2020) and Huber et al. (2020) that there was reduce learning achievement because of sudden change in classroom activities and dimension from physical interaction to online engagement most especially in low-income countries like Nigeria because students are separated from their teachers and friends. Online engagement reduces physical interaction and face to face communication which is believed to have potential of positively influencing the communication of individual with hearing impairment.

Moreover, the findings revealed that there were joints influences of aggression, self-esteem and communication on the performance of adolescents with hearing loss in English Language. The joint prediction of aggression, self-esteem and communication on achievement in English Language demonstrated the strength of some psychosocial variables on

academic achievement of student generally. Hence, exhibition of aggression by students may hamper academic growth likewise low self-esteem and poor communication can have adverse influence on learning achievement of adolescents with hearing impairment. This result supported the report that Covid-19 challenge mental health of the students (Kidman, et al., 2021), reduce learning achievement because of sudden change in classroom activities and dimension from physical interaction to online engagement most especially in low-income countries like Nigeria (Leeb, et al., 2020).

CONCLUSION

This study assessed psychosocial impact of Covid-19 on the achievement of secondary school adolescents with hearing loss in English Language in Lagos State. The study revealed that aggression, self-esteem and communication impacted differently on the success of adolescents with hearing disorders in English Language as a result of Covid-19. The findings also revealed that there was a joint contribution of Aggression, self-esteem and communication on learning achievement of adolescents with hearing loss in English Language. This is a clear indication that Covid-19 impacted negatively on both psychological and social constructs of students due to sudden change in life pattern occasioned by methodologies of mitigating the spread of the pandemic.

It is recommended that post Covid-19 period should be filled with activities that will enhance both social and psychological constructs of adolescents with hearing impairment. Teaching methodology should be more of cooperative learning approach to motivate sense of belongings and friendliness. Psychotherapies activities should be employed to desensitise some injurious behaviours among adolescents with hearing impairment bearing in mind that it is their formative period.

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