

Psychological distress as a Correlate of Learning Styles During COVID-19 pandemic among Undergraduates of Olabisi Onabanjo University, Ago Iwoye, Ogun State.

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Abstract

This study sought to establish the relationship between psychological distress and the learning disposition of undergraduates of Olabisi Onabanjo University, Ago-Iwoye during the COVID-19 pandemic. It hypothesized that there would be no significant relationship between psychological distress and the learning styles of undergraduates. The survey research design was adopted using two standardized instruments (Psychological distress scale and learning styles scale) in the collecting of data with reliability coefficients of 0.82 and 0.70 respectively. 391 participants were randomly selected from undergraduates in the Faculty of Education of Olabisi Onabanjo University. A simple linear correlation was used to analyze the data collected at 0.05 level of significance. The result ($r = 0.068$). R^2 (adjusted) = 0.005, F (1,389) = 1.819, $P > 0.05$, and the coefficient of determination is 0.002, indicated that there is no significant relationship between psychological distress and the learning styles of undergraduates during COVID-19 pandemic. It was therefore recommended that different learning styles should be included in the curriculum as this will compel students to participate in these initiatives and inspire them to acquire professional expertise. Also school administrators should implement advocacy techniques to support different learning styles.

Keywords: Psychological distress, learning styles, undergraduates.

Background

Disposition to learning is fundamental to the students learning process, and students require a complex mix of skills, values, and attitudes if they are to succeed. These complex dispositions need to be nurtured within the learning environment to ensure that students acquire transferable skills and capabilities needed to apply knowledge and skills confidently in changing circumstances. When a learner learns in an ideal setting and conditions, the following abilities are richly developed: Reading, writing, math, information and communication skills, imaginative and critical thinking, interpersonal and social skills, ethical and social aptitude, as well as cross-cultural awareness. Unfortunately, the Covid-19 outbreak

significantly altered this anticipated atmosphere and circumstances. In late December 2019, the COVID-19 outbreak caused chaos over the world, and education has been adversely impacted, just like every other significant sector. Universities, colleges, and all schools have all been adversely affected. Over 102 nations ordered the closure of all schools in general, while 11 others implemented localized school closures, according to the United Nations Educational, Scientific and Cultural Organization (UNESCO), which had an impact on more than 800 million students worldwide. One in five students and one in four students enrolled in higher education cannot attend classes.

In Nigeria, more than 3000 victims of the virus were reported dead. The situation under review has hampered the political, economic, and educational processes of the entire world. Onyema (2020) further opined that the education sector remains one of the worst hit by the Coronavirus outbreak. Coupled with the Covid-19 outbreak was also the strike action by the Academic Staff Union of Universities (ASUU), undergraduates in Nigeria's learning capabilities and learning environments have been completely overturned. These developments have affected the emotional and psychological well-being of learners in Nigerian Universities. The lockdown must have slowed down the expectations of many undergraduates especially, those in the final year of their studies.

The economic and financial hardship experienced by many households in Nigeria as a result of the total lockdown must have also caused a lot of psychological distress among students, especially the undergraduates just like in other countries. In fact, UNESCO (2020) report on the effect of the COVID-19 pandemic estimated over 23.4 million higher education students has been affected by the temporary closure of schools in the world. Lack of social interactions and face-to-face teaching and learning environment could also have an influence on the students' outlook on learning and reading patterns. In this study, learning disposition is conceptualized as the various approaches or methods being adopted during the COVID-19 pandemic. This is considered to be synonymous with the learning styles of students.

Critical examination of undergraduates' learning styles is one of the essential steps to be taken toward ensuring excellent academic performance at that higher level of educational attainment. The academic achievement of undergraduates at universities is strongly and favorably correlated with their learning styles, according to researchers like Moeinikia and Zahed-Babelan (2010) and Williams, Brown, and Etherington (2013). Undergraduates generally are expected to be

mature enough for personal study with little or no guidance. It is obvious that many students may find it a little bit difficult to cope with the rigors and stress attached to normal academic activities after lockdown. Therefore, their learning styles during this critical period of the COVID-19 pandemic could easily predict their coping and adjustment level in the very near academic sessions.

Learning styles can be defined as the procedure through which students synthesize the useful information at their disposal in their own convenient patterns. This definition is also in line with that of Mugolod (2018) who also defined learning style as processing information in their own ways. Hsieh, Jang, Hwang and Chen (2011) in their own way considered it as the characteristics, strengths, and preferences by which people receive and process information. It is important to note that scholars generally tend to agree that learning styles are methods of acquiring and processing information (Gokalp, 2013; James & Gardner, 1995 as cited by Dung & Florea, 2012). According to Reid (1987), who was quoted by Ghaedi and Jam (2014), learning styles are the variations among learners in how they use one or more senses to comprehend, arrange, and remember events. To this end, it can be deduced that every student including undergraduates must have a unique strategy of acquiring and processing information for excellent performance. However, a lot of factors could hamper effective learning and learning styles among students generally. These may include, but are not limited to, poor family background and structure, an unconducive learning environment, and bad health conditions. Head and Clark (2008) had earlier identified psychological distress as one of the determinants of students' learning and academic achievement. The present study therefore, considers the fact that COVID-19 pandemic as discussed earlier could have brought some forms of induced psychological distress on many undergraduates in Nigeria Universities.

Psychological distress is one of the favourable constructs of interest among Psychologists and Counsellors because of its consequences on the general well-being and function of people including students. According to Dooley and Fitzgerald (2012), psychological distress has a major impact on Irish students enrolled in higher education. Like Va'zquez, Otero, Diaz (2012); Stallman (2010); Verger et al. (2009); Dyrbye, Thomas and Shanafelt (2006); Nerdrum, Rustoen and Ronnestad (2006) and Humphris et al. (2002) have attested to the high incidence of psychological distress as a serious mental health problem among undergraduates globally and it has become a concern for all stakeholders in the education sector including parents, teachers, health officials, social workers and, counselors and psychologists. Yet, it has been very difficult to define psychological distress as a functional term due to numerous conditions associated with it and the varying instruments used in measuring the construct (Deasy & Coughlan, 2014).

There is a widespread perception of psychological distress as a marker of mental health according to Drapeau, Marchand, and Beaulieu-Pre'ost (2012). It has also been described to be a brief emotional response to stress which can result in other clinical conditions like depression if it is neglected (Horwitz, 2007). Psychological distress is also capable of affecting social interaction of people negatively if it is not treated on time (Wheaton, 2007). It is therefore imperative to embark on a study of this nature because of the consequences of the numerous effects of psychological distress on undergraduates. For instance, it has been found that psychological distress among undergraduates is linked to the incidence of risk behaviors, physical ailments, and mental health issues like depression and anxiety disorders (Barlow & Durand, 2005; Adams, Wharton, Quilter & Hirsch; 2008). It was again reported that psychological distress has the potential of impacting students' learning (Stallman, 2008).

The gender of a person is another crucial feature that may have an effect on how well they learn because it is a more accurate classification of people. According to Tatarintseva (2002), each gender has a distinct pattern of learning. In general, it is believed that men learn in a more tactical, visual, and kinesthetic way. While their female counterparts adopt passive sitting and auditory learning processes to increase their level of assimilation. Compared to men, they are more reserved, self-driven, and independent learners (Pizzo, 1990). Males also have a tendency to learn more effectively in a competitive atmosphere than females do, who prefer intimacy and consensus.

Investigating the connection between psychological discomfort and learning propensity of undergraduates of Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria during the COVID-19 pandemic is the primary goal of this study. It will also specifically determine the impact of psychological distress on the learning style of the participants used for this study. At the same time, gender difference in the learning styles of undergraduates of Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria during the COVID-19 pandemic will be determined.

Statement of Hypotheses

Ho₁. There is no significant relationship between psychological distress and the learning styles of the participants used for this study.

Ho₂. There is no significant gender difference in the learning styles of the participants used for this study.

Methodology

Research Design

To determine the degree of relationship between psychological distress and undergraduates' learning styles during the COVID-19 pandemic, this study used a correlation research design.

Participants

Three hundred and ninety-one (391) undergraduates from the Faculty of Education of Olabisi Onabanjo University were used for the present study through a simple random sampling technique.

Research Instruments

Two adopted standardized instruments were used to collect relevant information concerning the variables of this study including Kessler Psychological Distress Scale (K10) by Kessler et al. (2003) and Learning Styles Scale (LSS) by Abdollah Mohammad and Jaafar (2014) to The test-retest reliability of the scale was established by administering it twice to a group of students with a time interval of three weeks. The Cronbach alpha method has shown that the scale has a good dependability value of 0.82.

The LSS scale consists of 22 items, each with a rating from strongly disagree (1) to strongly agree (5). It had 22 elements total, which were broken

Method of Data Collection

The scales were prepared with Google Forms and via the web, the platform was made available to the respondents. Each respondent accessed the form through the faculty of Education WhatsApp group platform of the Olabisi Onabanjo University, Ago Iwoye in Ogun State, and the respondents filled out the scale randomly as it was convenient for them individually.

Result

Hypotheses

Ho₁. There is no significant relationship between psychological distress and the learning styles of the participants used for this study.

Table 1: *Summary of Correlation Matrix of the relationship among psychological distress and learning styles of undergraduates during COVID-19 pandemic*

measure psychological distress and learning styles among the participants respectively.

With a five-point Likert style scale ranging from "none of the time to all of the time," the K10 scale has 10 items about the respondents' emotional states. With a minimum score of 10 and a maximum score of 50, the instrument was scored by adding the scores of the 10 elements together. Low scores on the scale were seen as indicating a low level of psychological distress, whereas high scores were interpreted as indicating a high level of psychological distress.

down into five categories: perspective (7, 12, 16, 17, 19, and 22), solitary (1, 20, and 9), analytic (8, 13, and 15), competitive (2, 5 & 10) and imaginative (2, 5 & 10). (3, 6, 11 & 18). The scale's dimensions' total dependability value was >0.70. The test-retest reliability of the test was established to a group of students with a time interval of three weeks

Method of Data Analysis

The descriptive statistical methods of frequency distribution tables, percentages, means, standard deviations, and Pearson Moment Correlation, were used to present the nature of the data, and linear regression analysis, was used to test the prediction effect on the study's hypotheses at the 0.05 level of significance, were used to analyze the demographic data of the respondents.

Variable	N	Mean	Std.D	r	Sig	Remark
Psychological Distress	391	26.286	9.516	.068	.178	Not significant
Learning Style	391	50.171	21.645			

** . Correlation is critical at the 0.01 level (2-tailed).

Table 2: Model summary and coefficients of the contribution of psychological distress to undergraduates' learning disposition during COVID-19 pandemic

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	46.092	3.216		14.332	.000
	Psychological distress	.155	.115	.068	1.349	.178
Model Summary R = .068 R² = .005; R²_(adj) = .002 F_(1,389) = 1.819; p > .005						

According to Tables 1 and 2, there is no correlation between Olabisi Onabanjo University Ago Iwoye undergraduates' psychological distress and their learning styles during the COVID-19 pandemic. ($r = 0.068$). R^2 (adjusted) = 0.005, $F_{(1,389)} = 1.819$, $P > 0.05$, and the coefficient of determination is 0.002. This suggests that 0.2% of the variance in the H_{o2} . There is no significant gender difference in the

learning tendency of undergraduates at Olabisi Onabanjo University, Ago-Iwoye was caused by psychological distress. We accept the null hypothesis that there is no strong relation between Olabisi Onabanjo University Ago-Iwoye undergraduates' psychological well-being and their learning styles.

learning styles of the participants used for this study.

Table 3 shows gender differences in the learning styles of undergraduates during COVID-17 Pandemic

Variables	N	Mean	Std. D	T	df	Sig.	Remark
Gender Male	127	53.583	26.248	2.172	389	.003	Significant
Female	264	48.530	18.877				

Table 3 shows that there is a significant difference between male and female learning styles of undergraduates of Olabisi Onabanjo University Ago Iwoye during COVID-19 Pandemic ($t = 2.17$;

$df = 389$; $p < 0.05$). Male undergraduates adopted various learning styles (Mean = 53.58) than female (48.53) counterparts. Thus, the null hypothesis is rejected

Discussion, Conclusion, and Recommendations

The results of the current study revealed that there was no relationship between Olabisi Onabanjo University, Ago-Iwoye undergraduates' psychological distress, and their learning styles. Again, psychological distress did significantly contribute to the undergraduates' learning styles

during the COVID-19 pandemic. This could imply that the undergraduates have developed a high level of resilience against the adverse situations attached to the pandemic. Also, the student's level of cognition could be responsible for the outcome of this study Shi (2011) and Herrity (2019). The availability of various learning platforms such as virtual learning and other social media during the

COVID-19 lockdown could have also enhanced their level of adaptation to various adverse conditions of the pandemic.

This outcome, however, contradicts the (UNICEF, 2021) study, which emphasizes how detrimental school closures have been to kids' learning, health, and well-being. Every child, their family, their town, and their economy will suffer long-term effects. Many youngsters never catch up. Every child is affected by school closings, but the most vulnerable kids are hit the worst. During school closures, some students were able to access remote learning, but many of them struggled because of a lack of assistance. At least one-third of all kids worldwide lacked any access to remote learning. This necessitates more investigation into the unique characteristics of Olabisi Onabanjo University undergraduates.

Moreover, the results on the gender differences in the learning styles of undergraduates during COVID-19 pandemic shows that male undergraduates adopted various learning styles (Mean = 53.58) than female (48.53) counterparts. This collaborates with the results of the research conducted by Wehrwein, Lujan and Dicarolo (2007). Preferences for learning styles were evaluated according to gender. Importantly, just 45.8% of women favoured several modalities of presentation, compared to 87.5% of men. Males, on the whole, favoured many ways of information presentation, in contrast to females. Male learners might adapt to the various teaching philosophies they encounter throughout the day or choose to use and omit other tactics. The majority of female students (54.2%), however, favored a single method of information presentation, This result therefore shows that there had been differences in the learning styles of male and female over the years even during the Coovid-19 pandemic.

Based on the conclusion, it was therefore recommended that despite the little or no effect of psychological distress on and learning styles of

Olabisi Onabanjo University undergraduates during the COVID-19 pandemic, different styles of learning should be incorporated into the curriculum so as to help students to get fully prepared for future occurrence. Understanding learning styles can make it simpler to construct, alter, and create curricula and educational programs that are more effective. Additionally, it might compel students to participate in these initiatives and inspire them to acquire professional expertise. More importantly, school administrators should implement advocacy techniques to support different learning styles. In essence, a teacher must organize their lessons with the goal of accommodating each student's unique learning preferences in the classroom especially in adverse circumstances' as the COVID-19 pandemic.

References

- Adams, T. B., Wharton, C. M., Quilter, L. & Hirsch, T. (2008). The association between mental health and acute infectious illness among a national sample of 18- to 24-year-old college students. *Journal of America College of Health*, 56, 657–664.
- Barlow D, Durand V (2005) Abnormal psychology: An integrative approach. Belmont, CA: Thomson Wadsworth.
- Dooley, B. & Fitzgerald, A. (2012). My world survey: National study of youth mental health in Ireland. Dublin: Headstrong and University College Dublin School of Psychology.
- Drapeau, A., Marchand, A & Beaulieu-Pre´vost, D. (2012). Epidemiology of psychological distress. In *Mental Illnesses - understanding, prediction and control* Labate L, editor. *INTECH*, 105–134
- Dyrbye, L. N., Thomas, M. R. & Shanafelt, T. D. (2006). Systematic review of depression, anxiety, and other indicators of psychological distress among U.S. and Canadian medical students. *Academic Medicine*, 81, 354– 373.

- Herrity J. (2019) what is cognitive learning? definition, benefits, and examples, <https://www.indeed.com/career-advice/career-development/cognitive-learning>
- Horwitz, A. V. (2007). Distinguishing distress from disorder as psychological outcomes of stressful social arrangements. *Health*, 11, 273-289.
- Humphris, G., Blinkhorn, A., Freeman, R., Gorter, R., Hoad-Reddick, G., et al. (2002) Psychological stress in undergraduate dental students: baseline results from seven European dental schools. *European Journal of Dental Education*, 6, 22–29.
- Nerdrum P, Rustøen T, Rønnestad MH (2006) Student psychological distress: a psychometric study of 1750 Norwegian 1st-year undergraduate students. *Scan J Educ Res* 50. 95–109.
- Pizzo, J. (1990) Responding to Students' Learning Styles. St. John's University. NY.
- Shi C. (2011) A study of the relationship between cognitive styles and learning strategies. *Journal of Higher Education Studies 1 (1)*, DOI:10.5539/hes.v1n1p20
- Stallman, H. M. (2010). Psychological distress in university students: a comparison with general population data. *Autism Psychology*, 45, 249–257.
- UNICEF (2021) "Reopen Schools- There is no time to waste"
<https://www.unicef.org/coronavirus/reope>n-schools?gclid=Cj0KCQiAkNiMBhCxARISAIDDKNWA513BwH1anig7zJYEU53tHjzpgmeZ7WMffS7moHH3wMrj9yaSd7IaArzmEALw_wcB
- Tatarintseva, A. (2002). The Influence of the Gender Factor to the Learning Styles of Secondary Students in the Process of Language Learning. *Studies About Languages*. 2, 63-68.
- Va`zquez, F., Otero, P. & Dia`z, O. (2012). Psychological distress and related factors in female college students. *Journal of American College of Healing*, 60, 219–225.
- Verger, P., Combes, J. B., Kovess-Masfety, V., Choquet, M., Guagliardo, V., et al. (2009) Psychological distress in first-year university students: socioeconomic and academic stressors, mastery and social support in young men and women. *Social Psychiatry Epidemiology*, 44, 643–650.
- Wehrwein E. A., Lujan H. L., & DiCarlo S. E. (2007) Gender differences in learning style preferences among undergraduate physiology students. *Journal of Advances in Physiology Education* 31(2), 153-157 <https://doi.org/10.1152/advan.00060.2006>
- Wheaton, B. (2007). The twain meets distress, disorder, and the continuing conundrum of categories (comment on Horwitz). *Health*, 11, 303–319.