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ADAPTED MENTAL HEALTH LITERACY INTERVENTION ON KNOWLEDGE OF MENTAL ILLNESS STIGMATIZATION AMONG SELECTED SECONDARY SCHOOL STUDENTS IN OGUN STATE, NIGERIA

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ABSTRACT: *Mental health challenges are highly prevalent among adolescents, with stigma representing a critical barrier to seeking help. Although mental health interventions have been widely implemented globally, there is a notable lack of research evaluating their effectiveness in reducing mental illness stigma. Consequently, this study investigated the impact of a Mental Health Literacy (MHL) intervention on reducing mental illness stigmatization among secondary school students in Ogun State, Nigeria. The study employed a two-group quasi-experimental design. A sample of 155 participants was selected through multi-stage sampling from a total population of 5,011 students across six selected schools in Ogun State. Participants were divided into Intervention group (IG) and Control group (CG). The intervention involved implementation of a standardized educational module (GUIDE) on mental health literacy, while validated questionnaires was used to collect pre- and post-intervention data. Participants were assessed at three-time points: before intervention (P0), six weeks post-intervention (P1), and twelve weeks post-intervention (P2). Quantitative data were analyzed using descriptive and inferential statistics (ANOVA) at 5% significance level. Findings revealed that the mean knowledge scores of mental illness in the CG and IG at P0 were 15.45 ± 2.20 and 15.21 ± 2.3, respectively. At P1, these scores were 14.91 ± 1.70 for the CG and 17.76 ± 1.80 for the IG, and at P2, they were 15.1 ± 2.00 for the CG and 19.04 ± 1.30 for the IG. Significant differences ($p < 0.005$) were observed in the level of knowledge of mental illness stigmatization between pre-intervention and post-intervention for the IG. In conclusion, this study demonstrates the efficacy of mental health literacy interventions in enhancing the knowledge of secondary school students about mental illness stigmatization. It is recommended that mental health literacy programs be integrated into the secondary school curriculum in Ogun State to address stigma and promote mental well-being.*

KEYWORDS: Knowledge, Mental illness, Mental Health Literacy Package, Stigmatization, Students.

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INTRODUCTION

Stigma is a form of negative labelling directed at individuals or groups based on physical, psychological, or perceived differences, resulting in discrimination, social exclusion, and a diminished quality of life (Almeida & Sousa, 2022). This process involves labelling, stereotyping, and discriminatory behaviours, which are deeply embedded in cultural and contextual frameworks. In the context of mental health, stigma encompasses prejudicial attitudes and discriminatory actions toward individuals with mental health conditions, exacerbating their challenges and acting as a significant barrier to accessing care and support (Eiroa-Orosa et al., 2021).

Mental health stigma is a pervasive issue that hinders individuals from seeking and receiving appropriate care. It is rooted in societal misconceptions and prejudices, leading to social exclusion and discrimination (Bazzari & Bazzari, 2023).

Globally, mental illness stigma is recognized as a major barrier to mental health care, contributing to a significant treatment gap. Approximately 66% of individuals with mental health disorders avoid seeking medical treatment due to stigma, fear of social exclusion, and discrimination (World Health Organization, 2022).

In Africa, mental health stigma remains a critical challenge, exacerbated by cultural and societal factors. Mental illnesses are often misunderstood and attributed to supernatural causes or moral failings, leading to widespread discrimination and social exclusion (Monnapula-Mazabane & Petersen, 2021). Over 50 % of individuals in Africa avoid utilising mental health services to prevent being labelled as mentally ill (Pribadi et al., 2020).

Nigeria, as one of Africa's most populous nations, faces significant mental health stigma challenges. Approximately 1 in 4 Nigerians, or about 50 million people, experience mental health issues, yet 75% of these cases remain untreated, particularly in low- and middle-income countries like Nigeria (Global Mental Health Statistics, 2022). Stigma in Nigeria is deeply rooted in societal beliefs, with mental health conditions often attributed to drug abuse, evil spirits, or brain sickness. This leads to individuals being taken to prayer houses for spiritual interventions rather than receiving appropriate medical care, hindering effective mental health service delivery (Ogbonna et al., 2020; Mental Health in Nigeria Survey Africa Polling Institute and EpiAFRIC, 2019).

In Ogun State, located in southwestern Nigeria, mental health stigma is particularly prevalent among youths. Approximately 30% of adolescents and young adults report experiencing discrimination or social exclusion due to their mental health status (Babasola et al., 2024; Adejimi, 2021). This stigma discourages help-seeking behaviours and negatively impacts their quality of life and social integration.

Mental health literacy (MHL) refers to the knowledge and beliefs about mental disorders that aid in their identification, management, and prevention (Campos et al., 2022). Individuals with adequate MHL exhibit better health-seeking behaviours, greater awareness of mental health resources, and improved quality of life. Conversely, limited MHL is associated with reluctance to seek mental health services, leading to worsening conditions (Mansfield et al., 2020).

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Studies have demonstrated that MHL interventions significantly enhance mental health knowledge and, to a lesser extent, reduce stigmatizing attitudes (Freţian et al., 2021; Patafio et al., 2021). The World Mental Health Report (2022) emphasizes the need to educate about mental health, so as to provide effective care and support (WHO, 2022).

In Nigeria, mental health awareness remains low. A 2019 survey by the Africa Polling Institute (API) and EpiAFRIC revealed that while many respondents recognized mental health disorders, they primarily attributed them to drug abuse, evil spirits, or brain sickness. This highlights a significant gap in mental health literacy and access to appropriate services (API & EpiAFRIC, 2019). Educational settings, such as schools and universities, play a critical role in shaping attitudes toward mental health. Interventions in these environments have shown promise in improving mental health literacy and reducing stigma among students (Lai et al., 2022).

This highlights the urgent need for targeted research on mental health literacy interventions in secondary school settings to address stigma and improve mental health outcomes. This study, therefore, sought to fill this gap by assessing the effectiveness of an adapted mental health literacy intervention in improving knowledge of mental health-related stigma among secondary school students in Ogun State.

METHODOLOGY

Study design, population & location

This study employed a quasi-experimental design with pre-intervention & post-intervention studies conducted on two groups (control group and intervention group). The process of data collection and implementation of the educational program took a duration of 12 weeks. In this study, data from the two groups were collected at baseline before intervention (P0), six weeks post-intervention (P1), and twelve weeks post-intervention (P2). The intervention lasted for four consecutive weeks following baseline and only took place in the intervention group.

The target population were Senior Secondary School students attending selected public secondary schools within Ogun State. A total of 155 students (both male and female) participated in this study.

The research study and intervention took place inside the hall located on the premises of each selected school (Abeokuta Grammar School, Government Science School and Lisabi Grammar School).

Sample size

The sample size for this study was calculated using the Lemeshow Sample size formula (Lemeshow et al., 1990). A sample size of 155 students was calculated to ensure statistical precision. Multiple sampling techniques were used to ensure the selection of appropriate participants for the study. Selected students were then randomly assigned to either the Intervention Group (IG) or the Control Group (CG). There were 78 participants in the Intervention Group (IG) and 77 participants in the Control Group (CG) respectively.

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Intervention Package

The mental health and high school curriculum GUIDE was adapted as the intervention package. The package consists of The Stigma of Mental Illness, Understanding Mental Health and Mental Illness, Information on Specific Mental Illnesses, and Role Play (Sandra et al., 2023). The intervention package was designed to address the stigmatization of people living with mental illness among secondary school students in Ogun State.

It is a comprehensive educational program divided into four modules. Each module focuses on a specific aspect of mental health and aims to improve students' mental illness. The modules include various activities such as PowerPoint presentations, digital storytelling, video discussions, and interactive problem-solving exercises to engage students and foster a supportive learning environment.

Data Collection

A well-designed questionnaire was used to collect the data from participants. The questionnaire assessed participants' knowledge towards mental health stigma through 24 items. These items were adapted from the instructional guide of mental health literacy package to mental health (KAMH) scale which was developed by Welsh research group (Sandra et al, 2023). Participant could respond to each of the 24 items on True or False. True was scored one (1) and false was scored (2).

Participants' knowledge of mental illness stigmatization was assessed before they underwent the educational program. This provided baseline data that quantitatively measured participants' status before and after the intervention.

At each stage of the study design, data was collected from both groups.

Data Analysis

The data generated was analysed using the International Business Machine-Statistical Package for Social Sciences (IBM-SPSS, Armonk, NY, USA) version 23. The data were coded into the software and thereafter cleaned. Descriptive and inferential statistics were used for data analysis. Descriptive statistics (frequency distribution tables, percentage, mean and standard deviation) were used to analyse the socio demographic characteristics of the participants and research questions. Means and standard deviations were computed for items within groups.

Inferential statistics such as t-test pairwise within and between variable comparison and PPMC were used for the hypotheses. Cohen's D was used to measure the effect size. All the hypotheses were tested at a 5% level of significance.

Ethical Consideration

Informed consent was obtained from the parents and legal guardians of all participants. A number of ethical guidelines, such as confidentiality, anonymity, and data protection, were followed during the research's execution. An ethical approval letter was applied for and obtained from the Ogun State Ministry of Education to enable accessibility to the students.

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RESULTS

The participant's level of knowledge regarding the stigmatization of mental illness was measured on a 24-point rating scale. The maximum score for correct responses for the knowledge was 24, while the minimum was 0. The score 0 – 11 was categorised as below average knowledge score,12 – 18 was average knowledge score, and above average knowledge score was from 19 – 24.

Socio-Demographic Characteristics Of Respondents

Table 1 summarises the demographic characteristics of the respondents.

Table 1: Demographic Characteristics of the Respondents

Variable	Category	Intervention group Frequency (%)	Control group Frequency (%)
Age (years)	13	14(17.9)	4(5.2)
	14	20(25.6)	9(24.7)
	15	20(25.6)	37(48.1)
	16	13(16.7)	8(10.4)
	17	4(5.1)	6(7.8)
	18	5(6.4)	1(1.3)
	19	2(2.6)	2(2.6)
Gender	Male	44(56.4)	47(61.0)
	Female	34(43.6)	30(39.0)
Religion	Christianity	61(78.2)	60(77.9)
	Islam	17(21.8)	16(20.8)
	Others		1(1.3)
Ethnicity	Yoruba	68(87.2)	69(89.6)
	Igbo	9(11.5)	5(6.5)
	Hausa	1(1.3)	3(3.9)
Class	SS1	19(24.4)	1(1.3)
	SS2	21(26.9)	73(94.8)
	SS3	38(48.7)	3(3.9)

Baseline Level Of Knowledge Of Mental Illness Stigmatization Among Participants In The Control And Intervention Groups

At baseline (P0), the knowledge level of participants in intervention group (IG) and control group (CG) was determined. In the intervention group, 96.2% of participants had average knowledge score and 3.8% had a score below average. While 87.0% of participants in the control group had average knowledge score on mental illness and 7.8% had above average knowledge of mental illness.

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At baseline, the mean ± SD score for the participants level of knowledge regarding mental stigmatization in intervention group and control group was 15.2 ± 2.3 and 15.4 ± 2.2 respectively.

Table 2: Summary of the Knowledge assessment at baseline P0 (intervention group)

Variable	Maximum points on the scale of Measure	Pre-intervention (n=78)	
		X(SE)	±SD
Knowledge	24	15.2(0.258)	2.3
Below average (0 – 11)		3(3.8%)	
Average (12 – 18)		75(96.2%)	
Above average (19 – 24)		0(0.0)	

Table 3: Summary of the Knowledge assessment at baseline P0 (control group)

Variable	Maximum points on the scale of Measure	Pre-intervention (n=77)	
		X(SE)	±SD
Knowledge	24	15.4(0.254)	2.2
Below average (0 – 11)		4(5.2%)	
Average (12 – 18)		67(87.0%)	
Above average (19 – 24)		6(7.8%)	

Effect Of Mental Health Literacy Package On Knowledge Of Mental Illness Stigmatization In The Intervention Group At 6th Week Post Intervention (p1) And At 12th Weeks Post Intervention (p2)

At 6-week post- intervention (P1), the intervention group had a mean knowledge score of 17.8 ± 1.8, and this was increased to 19.0 ± 1.3 at 12-weeks post – intervention (P2). Similarly, 29.5% of the respondents in the intervention group had above average knowledge at the 6-week post-intervention (P1) which was increased to 90.4% at 12-week post-intervention (P2).

Table 4: Summary of knowledge of mental illness stigmatization at 6 weeks and 12 weeks post-intervention (intervention group)

Variable	Maximum points on the scale of Measure	6th week post-intervention (n =78)		12th week post-intervention (n =73)*		*ES (95%CI)	p-value
		X(SE)	±SD	X (SE)	±SD		
Knowledge	24	17.8(0.202)	1.8	19.0(0.157)	1.3	0.62(0.74 – 1.62)	<0.001
Below average(0 – 11)		0(0.0%)		0(0.0%)			

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Average (12 – 18)	55(70.5%)	7(9.6%)
Above average(19-24)	23(29.5%)	66(90.4%)

***Attrition rate of 6.4% (73/78 particpants were found at 12th week)**

Level Of Knowledge Of Mental Illness Stigmatization In The Control Group At 6th Week Post Intervention (p1) And At 12th Weeks Post Intervention (p2)

In the control group, participants had a mean score of 14.9 ± 1.7 at the 6-week assessment (P1) and 15.1 ± 2.0 at the 12-week assessment (P2). Most of the participants (>70%) had average knowledge at both P1 and P2, but only 2.6% had above-average knowledge at the 6-week assessment (P1), and it increased to 11.3% at the 12-week assessment (P2).

Table 5: Summary of knowledge of mental illness stigmatization at 6 weeks and 12 weeks' assessment (control group)

Variable	Maximum points on the scale of Measure	6th week assessment (n=75)		12th week assessment (n=71)*		ES (95% CI)	p-value
		X(SE)	**±SD**	**X (SE)**	**±SD**		
Knowledge	24	14.9 (0.199)	1.7	15.1 (0.235)	2.0	0.09 (-0.35-0.75)	.469
Below average (0 – 11)		2(2.6%)		0(0.0%)			
Average (12 – 18)		71(94.8%)		63(88.7%)			
Above average (19 – 24)		2(2.6%)		8(11.3%)			

***Attrition**

DISCUSSION

The findings demonstrated a notable improvement in mental health knowledge following the intervention (at P1), with the mean knowledge score of the intervention group increasing from 15.2±2.3 to 17.8±1.8. This improvement was particularly significant when contrasted with the control group, which showed no meaningful change (15.4±2.2 to 14.9±1.7). The intervention's effectiveness was further evidenced by the increase in participants with above-average knowledge from 0% to 29.5%, suggesting that targeted educational interventions can successfully enhance mental health literacy.

These results align with existing literature on mental health knowledge and intervention effectiveness. For instance, Funkhouser (2017) demonstrated that mental health awareness campaigns could effectively reduce stigma and increase help-seeking behaviour among college

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students, particularly when participants actively engaged in educational events. This parallel supports the value of structured interventions in improving mental health literacy.

The baseline (P0) findings, where almost all of the participants had average knowledge pre-intervention, are comparable to findings from Henshaw et al. (2020), who found that more than half of students in India had average knowledge of mental health. However, the post-intervention improvement to the extent that approximately one-third achieved above-average knowledge suggests that structured educational programs can significantly enhance understanding beyond typical baseline levels. The observed improvement is particularly noteworthy given the widespread knowledge gaps identified in various populations. The successful knowledge improvement demonstrated in this study suggests that well-designed interventions could address similar knowledge deficits in other populations.

The significance of these improvements extends beyond mere knowledge acquisition, especially as observed in the intervention group at 12 weeks post-intervention (P2). A significant increase in the knowledge level of participants was observed at P2, with the respondents in the intervention group with above-average knowledge increasing to 90.4% at P2 compared to 29.5% at the 6-week post-intervention (P1).

As Henshaw et al. (2020) argued, insufficient knowledge about mental illness often correlates with reduced help-seeking behaviour and increased stigma. Therefore, the substantial increase in above-average knowledge (29.5% to 90.4%) could potentially translate into improved help-seeking behaviours and reduced stigma among participants. These findings are especially relevant given the persistence of misconceptions about mental illness in many communities, as documented by Puspitasari et al. (2020), where significant proportions of respondents attributed mental illness to supernatural causes. The marked improvement in knowledge scores suggests that educational interventions can effectively combat such misconceptions and provide a more accurate understanding of mental health conditions.

The contrast between intervention and control groups' outcomes also underscores the importance of structured educational programs in improving mental health literacy. This aligns with Bazzari and Bazzari's (2023) findings, which highlight the need for augmented understanding through supplementary courses and training programs, particularly among healthcare students.

IMPLICATION TO RESEARCH AND PRACTICE

The implication of this study is that educational interventions aimed at reducing mental illness stigmatisation should be prioritised and incorporated into curricula and community programs. Policymakers and practitioners should consider the findings of this study when developing programs and policies aimed at reducing mental health stigmatisation.

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CONCLUSION

The findings of the study concluded that intervention was effective in improving the knowledge of secondary school students towards mental illness stigmatisation. This has also made them committed to advocacy of mental illness stigmatisation information.

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