

Knowledge, Utilization and Relevance of Social Media and Digital Health in Promoting Mental Health among Undergraduate Students in a Private University, Nigeria: A Cross- Sectional Study

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Knowledge, Utilization and Relevance of Social Media and Digital Health in Promoting Mental Health among Undergraduate Students in a Private University, Nigeria: A Cross-Sectional Study

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ABSTRACT

Background: Mental health challenges among university students is now a public health concern, with significant implications for academic performance, social functioning, and overall well-being. Although social media and digital health have emerged as accessible tools for mental health information, support, and intervention, evidence regarding knowledge, utilization, and relevance of these platforms among students remains limited in Nigeria. This study assessed the knowledge, utilization, and relevance of social media and digital health platforms in promoting mental health among undergraduate students at Bowen University, Iwo, Osun State, Nigeria.

Methods: A descriptive cross-sectional study was conducted among 359 undergraduate students using a multistage sampling technique. Data were collected using a structured, self-administered questionnaire comprising sections on socio-demographic characteristics, knowledge of social media and digital health for mental health promotion, utilization and relevance of these platforms, and barriers to their use. Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 27. Descriptive and Inferential statistics were used to summarize associate and identify predictors of the utilization of social media and digital health platforms at $p < 0.05$.

Results: Knowledge of social media and digital health for mental health promotion was optimal (76.0%). The major reason for using these platforms was stress and anxiety reduction (52.6%). The relevance of the platforms was below average (45%). Privacy concerns (53.5%), inaccurate or misleading information (39.6%), time constraints (37.9%), and lack of trust in platform credibility (37.0%) were identified barriers. The utilization of these platforms were determined by a moderate positive significant association with satisfaction level of respondents from their use AOR = 1.648 (C.I = 1.243 – 2.185, p-value <0.001).

Conclusion: The study shows a necessity to intensify awareness campaigns on the availability and benefits of utilizing social media and digital health platforms to improve student's mental health.

Keywords: knowledge, utilization, relevance, social media, digital health, undergraduates

BACKGROUND

Mental health is a state of well-being where the abilities of an individual to cope with day-to-day stress, work productively, and make meaningful contributions to their community are realized [1]. The high surge in the prevalence of mental health problems among university students in Nigeria have been associated to socio-demographics characteristics, academic workload, poor time

management, lack of emotional support systems, and uncertainties about the future [2,3]. These problems are complicated by engagements of students in maladaptive behaviour including social withdrawal, aggression, substance use, and risky decision-making, which create a cycle of poor coping strategies that fail to provide sustainable solution to the underlying issues [2].

The integration and adoption of social media and digital health in promoting mental health have become an increasingly significant aspect [4]. Social media platforms such as Facebook, Twitter (now X), Instagram, and TikTok, as well as dedicated mental health communities on Reddit, are now used to disseminate mental health information, raise awareness, reduce stigma, and connect individuals with professional resources, peer groups, and coping tools, thereby creating new avenues for engagement and support [5,6].

In low- and middle-income countries, where access to mental health services is particularly limited, social media and digital health have provided meaningful, cost-effective, and scalable solutions to mental health problems, particularly among students [7]. Despite the promising evidence of the effectiveness of social media and digital health platforms in addressing mental health problems in Africa, recent studies reported an under-utilization among university students in Nigeria. Evidence from Nigeria studies provide empirical support for the importance of these issues [8,9].

Technology Acceptance Model provides a useful theoretical lens for understanding students' engagement with social-media and digital-health platforms for mental-health promotion. In the present study, perceived relevance can be conceptually related to perceived usefulness because students who regard social media and digital platform as relevant to their mental-health information or support needs may be more likely to consider it useful and consequently engage

with it [10]. Similarly, platforms that are perceived as accessible, convenient, understandable, and easy to navigate may be more readily accepted and utilized

Although recent Nigerian researches have assessed the use of digital-health platforms in promoting mental-health among university students, further investigation remains warranted [8,9]. In particular, examining social media alongside dedicated digital-health platforms may provide a broader understanding of the digital environments through which students encounter mental-health information and support. This distinction is important because students may be aware of or frequently use social-media platform without necessarily recognizing their potential relevance to mental-health promotion as highlighted in some studies [9,11]. The study seeks to contribute to the emerging literature on digital approaches to mental health promotion among university students and to provide context-specific evidence that can inform universities, mental-health practitioners, policymakers, and other stakeholders in developing accessible, acceptable, and student-centred approaches to mental health promotion

METHODS

Study Design

The study adopted a descriptive cross-sectional study design to assess the knowledge, utilization and relevance of social media and digital health platforms in promoting mental health among university students.

Study Setting

The study was conducted in Bowen University, Iwo, Osun State. Bowen University is a private Christian institution owned by the Nigerian Baptist Convention and located in Iwo, Osun State, South-west Nigeria. Established in 2001, the University is committed to providing a conducive

and dynamic environment for teaching, learning, and research, to produce graduates who exhibit Christ-like character, strong moral values, leadership qualities, and academic excellence. Bowen University operates a Modified Collegiate System consisting of seven Colleges: the College of Agriculture, Engineering and Science (COAES); College of Environmental Sciences (COEVS); College of Computing and Communication Studies (COCCS); College of Health Sciences (COHES); College of Liberal Studies (COLBS); College of Law (COLAW); and College of Management and Social Sciences (COMSS). These Colleges offer a broad range of undergraduate programmes spanning scientific, professional, technical, and liberal disciplines.

Study Population

The study population comprised both male and female undergraduate students at Bowen University, Iwo, Osun State.

Determination of Sample Size

The sample size was determined using Cochran's sample size formula[12].

Where,

n = sample size

Z = the standard value at 5% (Standard value of 1.96)

P = the estimate of the key proportion. Assumed to be 50% = 0.5

e = the desired level of precision = 0.05

The calculation of n is thus

$$n = \frac{(1.96^2 \times 0.5(1-0.5))}{e^2}$$

107 0.05^2

108 $n = 384.16$

109 The population of undergraduate students in Bowen University is a total of 5,479 students (2,597
110 males and 2,882 females in the hostels), the Finite Population Correction (FPC) was applied:

111
$$n = n_0 / (1 + (n_0 - 1) / N)$$

112
$$n = 384.16 / (1 + (384.16 - 1) / 5479)$$

113
$$n = 384.16 / 1.0700 \approx 358.8$$

114 An attrition rate of 10% of 359 (36) was added to increase the sample size to 395. However, after
115 data collection, there were no incomplete or non-response questionnaire; therefore, the sample
116 size was returned to its original figure, which was 359 respondents.

117 **Selection of Study Participants**

118 Since the study included all hostels, the number of respondents selected from each hostel was
119 determined proportionately based on the hostel population size. For each hostel, the list of rooms
120 was obtained from hostel administrators and rooms were selected through a systematic sampling
121 technique. A respondent was recruited in each room. Where more than one eligible student resides
122 in a room, a simple random sampling method (balloting) was used to select one respondent. Each
123 occupant was assigned a number corresponding to their bed space, and one number was randomly
124 drawn. See Table 1 for detailed information.

125 **Table 1: Proportionate sample allocation for hostels**

Hostel	Students	Calculation	Sample

Matthew	493	$(493 \div 5479 \times 359)$	32
Mark	270	$(270 \div 5479 \times 359)$	18
Luke	513	$(513 \div 5479 \times 359)$	34
John	480	$(480 \div 5479 \times 359)$	31
Onosode	306	$(306 \div 5479 \times 359)$	20
Extension	209	$(209 \div 5479 \times 359)$	14
Old VC Lodge	49	$(49 \div 5479 \times 359)$	3
UPE II	141	$(141 \div 5479 \times 359)$	9
UPE III	136	$(136 \div 5479 \times 359)$	9
A1 & A2	240	$(240 \div 5479 \times 359)$	170
B – H Hostels	1,014	$(1014 \div 5479 \times 359)$	66
Storey Building	240	$(240 \div 5479 \times 359)$	16
Sadler	240	$(240 \div 5479 \times 359)$	16
UPE I	120	$(120 \div 5479 \times 359)$	8
Ademola Ishola A	264	$(264 \div 5479 \times 359)$	17
Ademola Ishola B	264	$(264 \div 5479 \times 359)$	17
Ademola Ishola C	264	$(264 \div 5479 \times 359)$	17

288 Smart Hostel	288	$(288 \div 5479 \times 359)$	8
300 Bedded Hostel	288	$(288 \div 5479 \times 359)$	8
Total	5479		359

126

127 **Validity of Research Instrument**

128 The questionnaire underwent face and content validation. The research supervisor and two other
 129 professionals reviewed the study instrument to ensure that each item reflects the study objectives,
 130 is clear, relevant, and unambiguous. All corrections suggested by the instrument reviewers were
 131 carefully incorporated before administration.

132 **Reliability of Research Instrument**

133 A pre-test was conducted using 38 undergraduate students at another private university in Nigeria,
 134 representing approximately 10% of the total study sample size. The questionnaire was distributed
 135 twice, with a two-week interval between administrations, to assess the test-retest reliability of the
 136 instrument. Data obtained from the pre-test were analyzed using Cronbach's Alpha to evaluate
 137 internal consistency. A minimum reliability coefficient (α) of 0.70 or above was considered
 138 indicative of acceptable internal consistency, confirming that the instrument is reliable for the main
 139 study.

140 **Instrument for Data Collection**

141 The instrument used for data collection in this study was developed primarily for this study and
 142 was pre-tested in another private university. The Cronbach's Alpha for the knowledge items was
 143 0.73 and 0.9 for items on the relevance of social media and digital health platforms. The

questionnaire was divided into five sections to capture the socio-demographic characteristics, knowledge of social media and digital health platforms in mental health promotion, frequency and patterns of utilization of social media and digital health platforms, relevance of the platforms, and barriers towards utilization social media and digital health for mental health promotion. The instrument was pre-tested at another private university in the southwest Nigeria. Check the supplementary file for details.

Data Collection

Data were collected using a quantitative, self-developed and self-administered research instrument. Data were collected for three weeks in each hostel between 4:30 p.m. and 7:30 p.m. every day. Two female and one male research assistant were trained for this study among the undergraduate students.

Data Management and Analysis

Data collected were checked for completeness, coded, and entered into the Statistical Package for Social Sciences (SPSS) version 29 for analysis. Each questionnaire was assigned a unique identification number to ensure proper data management. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize respondents' socio-demographic characteristics and study variables.

Knowledge of social media and digital health use for mental health promotion was assessed using ten knowledge questions. Correct responses were scored one (1) point, while incorrect and “Not Sure” responses were scored zero (0). The total knowledge score ranged from 0–10. Respondents who scored at or above the 50th percentile were categorized as having good knowledge, while those who scored below the 50th percentile were categorized as having poor knowledge.

The frequency and pattern of social media and digital health platform utilization, perceived relevance of social media and digital health for mental health promotion, and barriers to utilization were analyzed using frequencies and percentages. Responses to relevance statements were measured using a three-point Likert scale (Disagree = 1, Neutral = 2, Agree = 3). A composite relevance score was computed, and respondents who scored at or above the 50th percentile were categorized as having high relevance, while those who scored below the 50th percentile were categorized as having low relevance.

Binary logistic regression was used for inferential statistics to examine associations between respondents' knowledge level, primary reasons and satisfaction with the utilization of social media and digital health platforms and relevance level. Statistical significance was set at $p < 0.05$.

Ethical considerations

Ethical approval was obtained from the Bowen University Teaching Hospital (BUTH) Ethics Review Committee in accordance with the Declaration of Helsinki and relevant ethical guidelines and regulations (reference number: BUTH/REC-27295). Permissions were also obtained from the Dean of Students' Affairs and hall wardens. Participation was voluntary, informed consent and assent were obtained from students, and confidentiality/anonymity assured.

RESULTS

Respondents' Socio-demographic characteristics

Most respondents, 228 (63.5%), were aged 18 years and above, with a mean age of 18.28 ± 5.210 . More than half, 187 (52.5%), of the respondents were females, Christianity was the predominant religion 326 (91.1%), and the majority, 280 (78.0%) were Yoruba. The highest proportion, 115 (32.0%) of respondents, were from the Faculty of Social and Management Science and most

188 respondents, 338 (94.2%), accessed the internet daily. Socio-demographic characteristics of
 189 respondents is presented in Table 2.

190 **Table 2: Socio-demographic characteristics of respondents**

Variables	Frequency (N)	Percentage (%)
Age (in years)	Mean Age: 18.28± 5.21	
< 18 years	127	35.4
≥ 18 years	232	64.6
Gender		
Male	169	47.5
Female	187	52.5
Religion		
Christianity	326	91.1
Islam	32	8.9
Traditional	0	0.0
Ethnicity		
Yoruba	280	78.0
Igbo	58	16.2

Hausa	10	2.8
Others*	11	3.0
Level of Study		
100L	99	27.6
200L	93	25.9
300L	99	27.6
400L	66	18.4
500L	2	0.6
Faculty		
Clinical Science	93	25.9
Health Science	70	19.5
Science & Science Education	11	3.1
Social & Management Science	115	32.0
Law	34	9.5
Agricultural Science	14	3.9
Internet Access		

Daily	338	94.2
3–5 times/week	16	4.5
1–2 times/week	2	0.6
Rarely	3	0.8

191

192 **Knowledge of social media and digital health in promoting mental health among respondents**

193 Most respondents, 351 (97.8%), correctly identified that social media platforms can be used to

194 share information about mental health, 325 (90.5%) knew that digital health platforms help

195 improve mental health, and 302 (84.1%), acknowledged the supportive role of online mental health

196 resources. The majority, 317 (88.3%) agreed that mental health applications can help with stress

197 management, mood tracking, and relaxation. Overall, 76% of respondents demonstrated good

198 knowledge of social media and digital health use towards mental health promotion. See Table 3,

199 Figure 1 for more information.

200 **Table 3: Knowledge of Social Media and Digital Health in Promoting Mental Health among**

201 **Respondents**

Knowledge Statements	True	False	Not Sure
Social media platforms can be used to share information about mental health.	351 (97.8%)*	6 (1.7%)	2 (0.6%)

Digital health tools, including apps and online programs, can help improve mental well-being.	325 (90.5%)*	16 (4.5%)	18 (5.0%)
Social media campaigns can increase awareness about mental health issues among students.	333 (92.8%)*	17 (4.7%)	9 (2.5%)
Online mental health support groups provide a safe space for people to discuss mental health problems.	302 (84.1%)*	24 (6.7%)	33 (9.2%)
Educational videos about mental health on social media can help reduce stigma.	308 (85.8%)*	29 (8.1%)	22 (6.1%)
Mental health apps can provide tools for stress management, mood tracking, and relaxation.	315 (87.7%)*	13 (3.6%)	31 (8.6%)
Social media can be a source of accurate and reliable information on mental health if used carefully.	308 (85.8%)*	25 (7.0%)	26 (7.2%)
Students can use online platforms to access professional mental health advice or counseling.	309 (86.1%)*	28 (7.8%)	22 (6.1%)

Digital health interventions can complement traditional mental health care services.	273 (76.0%)*	28 (7.8%)	58 (16.2%)
Promoting mental health through social media and digital tools can improve overall student well-being.	305 (85.0%)*	24 (6.7%)	30 (8.4%)

* = Correct Answers. Mean knowledge score: 8.73 ± 1.792

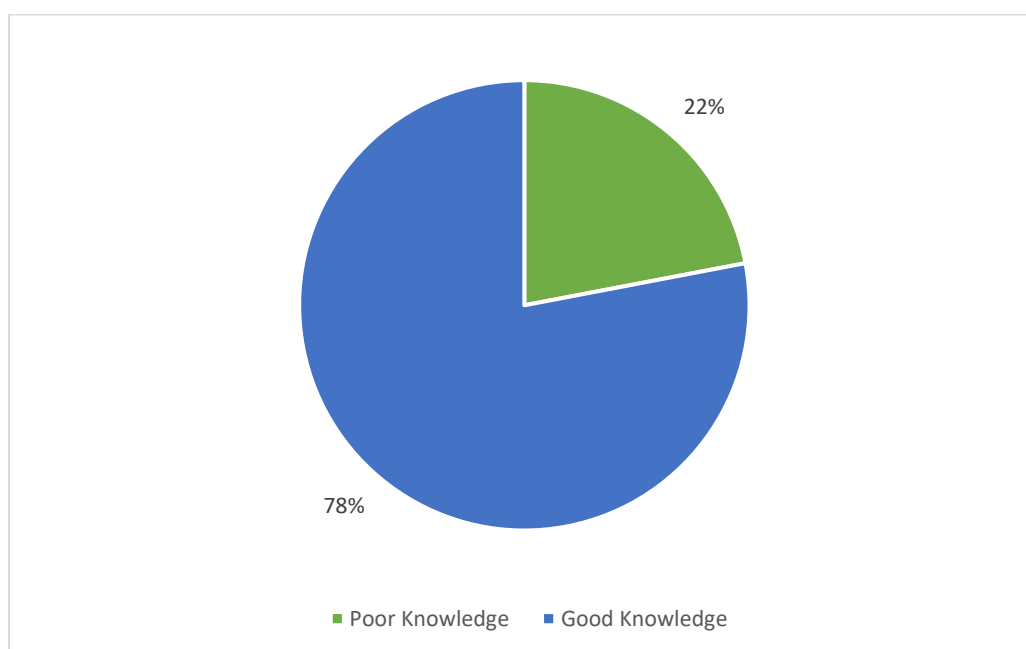


Figure 1: Knowledge of social media and digital health in promoting mental health among respondents

Types and frequency of social media and digital health utilization in promoting mental health

TikTok (64%) was the most frequently used social media platform for mental health, while an online therapy platform was the most frequently used digital health platform. The mean scores

shows that the minority of respondents frequently utilized social media (2.67) and digital health (2.11) platforms in promoting mental health. Overall, the frequency of utilization for mental health promotion was below average (45%). See Figures 2a and 2b, and Table 4.

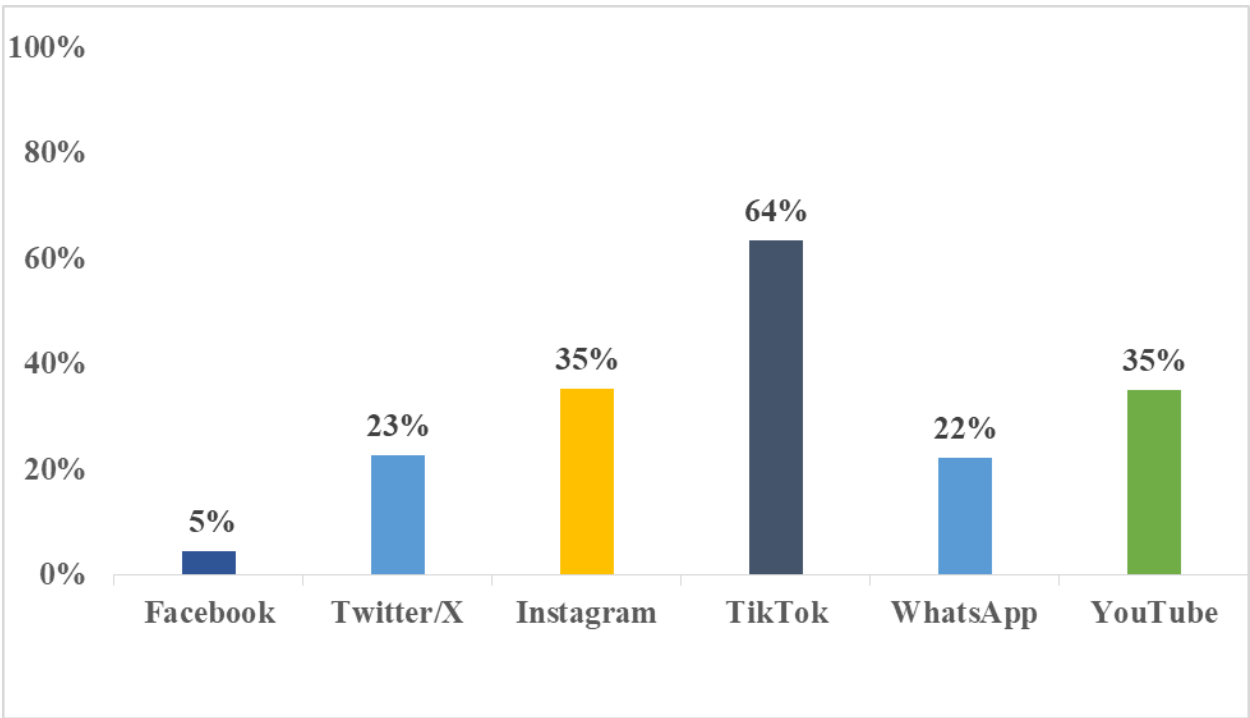


Figure 2a: Social media platforms utilized for mental health promotion

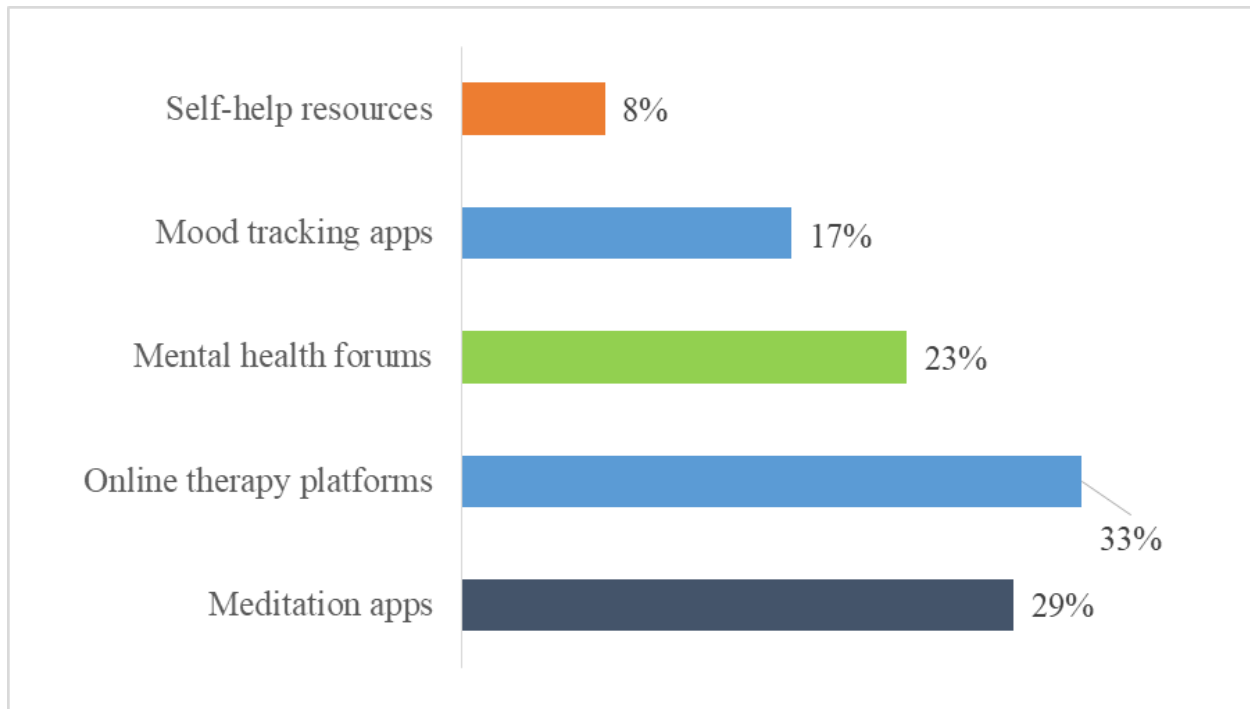


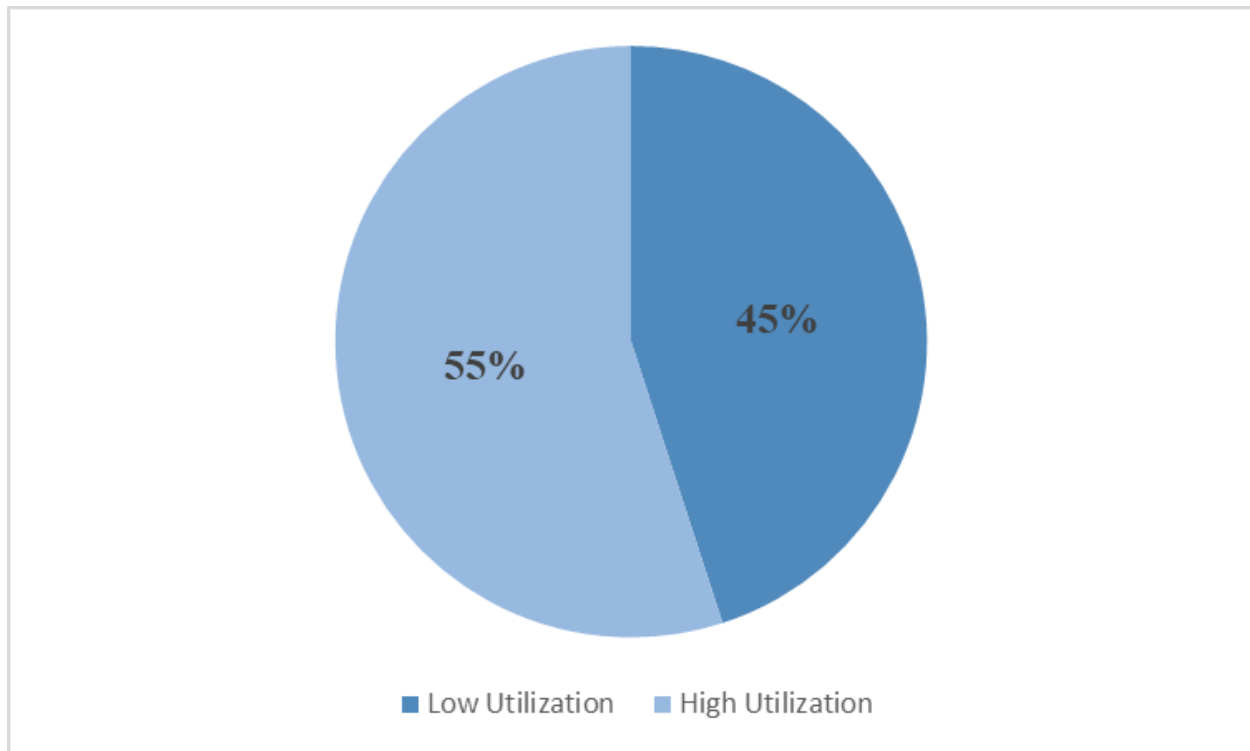
Figure 2b: Digital health platforms utilized for mental health promotion

Table 4: Mean scores for frequency of social media and digital health utilization

Items	Mean	Median	SD	SE
How often do you use social media platforms to cope with stress, anxiety, or other challenges?	2.67	3.00	1.019	0.054
How often do you use digital health platforms (apps, online therapy, and mental health	2.11	2.00	1.023	0.054

forums) to support your mental health?				
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218



219

220 **Figure 2c: Frequency of social media and digital health utilization**

221 **Primary reasons and satisfaction level for the utilization of social media and digital health**

222 The findings revealed that respondents utilized social media and digital health for a variety of
 223 mental health-related purposes. The most commonly reported reason for using these was to reduce
 224 stress and anxiety, as indicated by 189 (52.6%) respondents. This was followed by tracking mental
 225 health progress, reported by 75 (20.9%) respondents. Additionally, 64 (17.8%) respondents used
 226 these platforms to seek emotional support, and 31 (8.6%) reported using them to learn coping

227 strategies for managing mental health challenges. Regarding satisfaction with the social media and
 228 digital health platforms used for mental health purposes, less than half 120 (33.4%) of respondents
 229 reported dissatisfaction with the platforms. See Table 5 for details.

230 **Table 5: Reasons and satisfaction level for the utilization of social media and digital health**
 231 **platforms**

Items	Frequency	Percentage
Primary reason for using social media/digital health platforms		
To reduce stress and anxiety	189	52.6%
To seek emotional support	64	17.8%
To learn coping strategies	31	8.6%
To track my mental health progress	75	20.9%
Satisfaction level with platforms used		
Very satisfied	1	0.3%
Satisfied	4	1.1%
Neutral	172	47.9%
Dissatisfied	120	33.4%
Very dissatisfied	62	17.3%

232

Relevance of social media and digital health in mental health promotion among respondents

More than half, 185 (51.5%) of the respondents disagreed that social media platforms help them feel connected and reduce feelings of loneliness, more than half, 207 (57.6%) disagreed that using social media improves their psychological well-being, and 172 (47.9%) disagreed that digital health platforms are effective in managing stress and anxiety. Overall, the relevance of social media and digital health platforms in promoting mental health among respondents was low (45%). See Table 6, Figure 3 for more information.

Table 6: Relevance of social media and digital health platforms in mental health promotion

Items	Disagree	Neutral	Agree
Social media platforms help me feel connected and reduce feelings of loneliness	185 (51.5%)	110 (30.6%)	64 (17.8%)
Using social media improves my psychological well-being	207 (57.6%)	101 (28.1%)	51 (14.2%)
Digital health platforms (apps, online therapy, forums) are effective in managing stress and anxiety	172 (47.9%)	125 (34.8%)	62 (17.3%)
I believe that digital health platforms provide reliable mental health support	177 (49.3%)	120 (33.4%)	62 (17.3%)
Social media provides me with useful coping strategies for mental health challenges	173 (48.2%)	112 (31.2%)	74 (20.6%)

I find digital health platforms relevant for improving my overall psychological well-being	192 (53.5%)	111 (30.9%)	56 (15.6%)
Social media motivates me to adopt positive mental health habits (e.g., mindfulness, journaling)	171 (47.6%)	112 (31.2%)	76 (21.2%)
Digital health tools (apps, online therapy, forums) help me reduce symptoms of depression or anxiety	193 (53.8%)	102 (28.4%)	64 (17.8%)
Social media communities provide emotional support that is helpful for my mental health	187 (52.1%)	116 (32.3%)	56 (15.6%)
Overall, I consider social media and digital health platforms highly relevant in promoting my psychological well-being	183 (51.0%)	113 (31.5%)	63 (17.5%)

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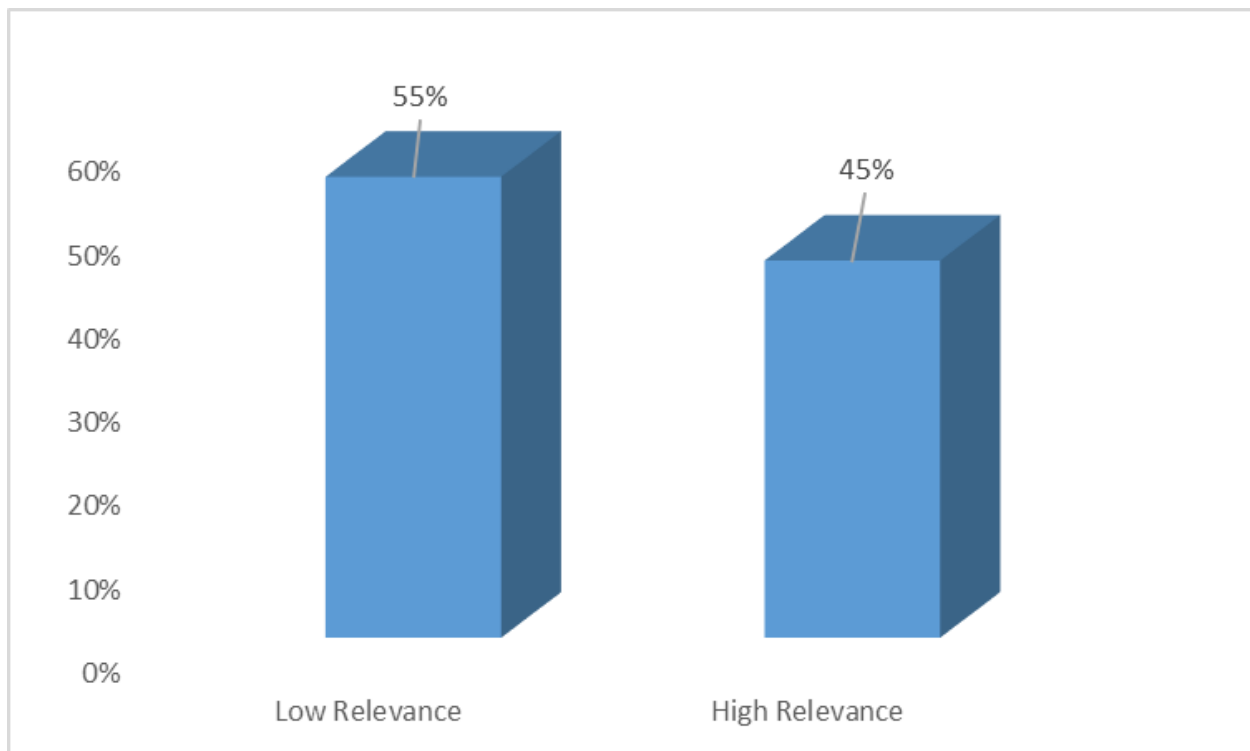


Figure 3: Relevance of social media and digital health utilization in mental health promotion

Barriers towards the utilization of social media and digital health in mental health promotion

The findings in Table 7 show that the major barrier to the use of social media and digital health for mental health promotion was privacy concerns, 192 (53.5%). Many respondents also reported limited or poor internet access 165 (46.0%) and exposure to inaccurate or misleading information 142 (39.6%) as barriers. Similarly, 136 (37.9%) reported time constraints or heavy academic workload and 133 (37.0%) indicated lack of trust in platform credibility. Fewer respondents reported lack of awareness of available platforms 110 (30.6%), and technical difficulties 65 (18.1%) were the least reported barriers.

Table 7: Barriers towards the utilization of social media and digital health

Barriers	Yes N (%)	No N (%)
Privacy concerns	192 (53.5%)	167 (46.5%)
Fear of stigma or judgment from peers	128 (35.7%)	231 (64.3%)
Limited or poor internet access	165 (46.0%)	194 (54.0%)
Lack of awareness about available digital health platforms	110 (30.6%)	249 (69.4%)
Technical difficulties in using apps or platforms	65 (18.1%)	294 (81.9%)
High cost of data subscription	129 (35.9%)	230 (64.1%)
Inaccurate or misleading information on platforms	142 (39.6%)	217 (60.4%)
Lack of trust in the credibility of platforms	133 (37.0%)	226 (63.0%)
Time constraints or heavy academic workload	136 (37.9%)	223 (62.1%)
Lack of confidentiality or fear of data misuse	119 (33.1%)	240 (66.9%)

255

256 **Association between selected variables and relevance of social media and digital health**
257 **utilization**

258 The table below highlights a weak positive to a weak negative association between primary reasons
259 for utilization of social media and digital health platforms AOR = 1.147 (95% CI 0.959-1.372, p
260 < 0.134), satisfaction level AOR = 1.648 (95% CI 1.243-2.185, p < 0.001), knowledge of the two

platforms in promoting mental health AOR = 0.791 (95% CI 0.482-1.299, $p < 0.354$) and relevance among respondents. The only significant association was found between the satisfaction level from the utilization and relevance $p < 0.001$. See Table 8 for details.

Table 8: Association between selected variables and relevance of social media and digital health utilization

Variables	Std. Error	Wald	p-value	AOR	95% C.I	
					Lower Bound	Upper Bound
Primary Reasons for Social Media and Digital Health Platforms Utilization	0.091	2.246	0.134	1.147	0.959	1.372
Satisfaction Level from the Utilization	0.144	12.026	<0.001	1.648	1.243	2.185
Knowledge Level	0.253	0.858	0.354	0.791	0.482	1.299

DISCUSSION

Respondents' socio-demographic characteristics

The mean age of respondents was 18.28 ± 5.210 years, with the majority aged 18 years and above. Individuals within this age group are generally active users of digital technologies and social media platforms, making them an appropriate population for studies involving online information, digital

communication, and mental health resources. The study showed a slightly higher participation of females compared with males. This indicates that both genders were adequately represented, providing a balanced perspective on the subject under investigation.

Internet access among respondents was remarkably high, with the vast majority reporting daily internet use. This finding demonstrates that the study population had substantial exposure to digital information and online platforms. Frequent internet use may enhance access to mental health information, online support services, and digital mental health interventions. The high level of connectivity also suggests that digital-based health promotion strategies may be effective among this population.

Knowledge of social media and digital health for mental health promotion among respondents

The findings of this study revealed good knowledge regarding the use of social media and digital health for mental health promotion among respondents. Most students understood that social media platforms can be used to share mental health information, increase awareness, reduce stigma, and provide access to professional support and online counselling. The high level of knowledge observed in this study is consistent with the findings of previous studies [13,14,15], which reported that undergraduate students possess significant knowledge of social media platforms such as WhatsApp, Facebook, Instagram, and YouTube, and are familiar with how these platforms can be effectively used for communication, learning, and interaction. The present findings also agree with a previous study, where students frequently utilized internet-based platforms to access information, educational materials, and academic resources, indicating a strong understanding of the usefulness of digital technologies [16]. However, while the current study focused on the positive role of social media and digital health in mental health promotion, previous studies

focused on the negative effects associated with social media use, including distraction, addiction, cyberbullying, and poor academic performance [13,14,16]. This suggests that although students generally possess good knowledge of digital platforms and their benefits, there is still a need for proper guidance and responsible use to maximize the advantages of social media and digital health tools while minimizing their potential risks.

Frequency of social media and digital health utilization for mental health promotion

Despite the wide range of evidence highlighting the diverse roles of social media and digital health in mental health promotion, the findings of this study indicate a moderate and selective pattern of actual utilization among respondents. The study showed that a limited proportion of respondents used social media to cope with stress and anxiety. These findings suggest only partial engagement with social media as a coping mechanism despite high awareness of its potential benefits. This moderate level of use contrasts with other previous studies, which emphasized that social networking sites such as Facebook and Instagram are widely utilized for emotional support and reducing isolation through online mental health communities[17,18]. Similarly, the present study found low utilization of digital health platforms, as a minimal proportion of respondents never used them, while another substantial proportion rarely used them. This sharply contrasts with previous findings where increasing adoption of mobile health applications for mood tracking, mindfulness, and cognitive behavioural therapy among young people were reported [19,20,21]. These findings imply the possibility of an increased reliable and meaningful utilization of social media and digital health in promoting mental health among university student, especially in Nigeria if more attention is shifted towards these platforms.

The primary reason for using social media and digital health platforms was stress and anxiety reduction, tracking mental health progress and seeking emotional support, while learning coping

strategies was the least commonly reported reason. This aligns with prior studies that identified emotional relief and coping assistance as major motivations for digital engagement, although the depth of structured mental health use remains limited [18,19,20]. These findings suggest that well-monitored and secure platforms could improve the mental health of undergraduate students. Only a negligible proportion reported being satisfied or very satisfied. These findings indicate generally low satisfaction levels, differing from earlier reports of positive user experiences with digital mental health tools; these could be linked to the safety of information and users on these platforms.

Relevance of social media and digital health utilization in mental health promotion among respondents

There were mixed perceptions regarding the relevance of social media and digital health platforms in mental health promotion, with the minority considering them relevant. This finding contrasts with the broader literatures which presents social media as a highly effective tool for mental health awareness, stigma reduction, and emotional support [5,22]. Our study suggest that although respondents recognized the relevance of these platforms, they are less confident about their practical mental health benefits, which could hinge on some other external factors.

This study further observed that a considerable proportion of respondents disagreed that social media motivated positive mental health habits, while a slight majority disagreed that digital health tools reduced symptoms of depression or anxiety and that online communities provided emotional support. These findings are inconsistent with two previous studies, where the role of digital platforms in fostering emotional expression, peer support, and mental health normalization through online engagement and advocacy were emphasized [23,24]. Given the moderate utilization of social media and digital health platforms among undergraduate students for mental health information, support, and self-care, the findings underscore the importance of ensuring that these

platforms are safe, secure, and evidence-based. As students increasingly rely on digital spaces to seek mental health support, concerns such as misinformation, privacy breaches, cyberbullying, exposure to harmful content, and unregulated mental health advice may undermine their effectiveness.

Furthermore, this study revealed a weak positive to a weak negative association between variables such as primary reasons for utilization, satisfaction with the utilization and knowledge of social media and digital health and relevance level. The only positive significant association identified was between satisfaction level and relevance level. This partially agrees with a study that noted that exposure to digital technologies is generally widespread across populations, suggesting either a considerable satisfaction with the platforms or improved relevance [5].

Barriers towards the utilization of social media and digital health in promoting mental health

The findings of this study revealed several barriers to the effective utilization of social media and digital health platforms in promoting mental health, ranging from privacy concerns, limited or poor internet access, inaccurate or misleading information, time constraints and academic workload, to lack of trust in the credibility of these platforms. Other barriers identified include fear of stigma, the cost of data subscriptions, lack of confidentiality, lack of awareness and technical difficulties. These findings indicate that students face a combination of technological, social, academic, and financial constraints in engaging with digital mental health resources. This finding is consistent with a study, which reported that despite the benefits of social media and digital health platforms in enhancing mental well-being and social connectedness among young adults in Nigeria, concerns such as unregulated use, online victimization, misinformation, privacy risks, and negative psychological effects like anxiety and loneliness remain significant challenges [25]. The findings revealed how the credibility and psychological safety concerns surrounding the utilization

of social media and digital health in promoting mental health could limit engagement among university students. The prominence of privacy and confidentiality concerns in this study aligns with another findings, which highlighted that issues of confidentiality, trust, and stigma remain major deterrents to the uptake of mental health services in Nigeria, while also noting that digital mental health support has the potential to reduce these barriers when properly regulated and trusted [11]. This suggests that the potential benefits of social media and digital mental health identified in previous studies have not yet fully translated into user-confidence among undergraduate students in Bowen University and could further limit the scalability of interventions highlighted in studies advocating for telepsychiatry and mobile mental health solutions.

Another health implication of under-utilization of social media and digital health platforms among university students is increase in the prevalence of mental health problems. Many students experiencing mental health problems and are not confident in accessing the mental health services rendered at the university level due to stigma, shame, confidence in healthcare providers explore digital health and social media platforms for supports, while many other students utilize the platforms to speak out and connects. This findings indicates that many of such students might suffer in silence if these platforms that help students are not considered as important avenues that be leveraged on to promote the mental health of undergraduate students.

Conclusion

The study revealed that although students recognized the relevance of social media and digital health in creating awareness and supporting mental well-being, the actual utilization of digital mental health services was generally low. The findings highlight the need for improved awareness, trust, accessibility, and integration of digital mental health services among undergraduate students.

Limitation of the Study

The study was limited to undergraduate students within a single institution; therefore, the findings may not be generalized to all university students in Nigeria. The use of a self-administered questionnaire may also have introduced response bias, as respondents may not have provided completely accurate information regarding their mental health practices and perceptions. In addition, the cross-sectional nature of the study made it difficult to establish causal relationships between variables. Limited time and financial resources may also have affected the scope of the study.

Recommendations

Based on the findings of this study, authors recommend that the university management and health authorities should intensify awareness campaigns on the availability and benefits of social media and digital mental health platforms to improve students' utilization of these services rather than only for entertainment purposes. Additionally, mental health professionals and digital health developers should ensure that online mental health platforms provide accurate, reliable, and evidence-based information to improve students' trust and satisfaction, ensuring confidentiality and data protection measures are strengthened to address students' privacy concerns and encourage greater participation. Universities should incorporate mental health education and digital mental health literacy into orientation programmes and health promotion activities to increase students' understanding and acceptance of digital interventions.

Declarations

Ethics approval and consent to participate: Ethical approval was obtained from the Bowen University Teaching Hospital (BUTH) Ethics Review Committee in accordance with the

Declaration of Helsinki and relevant ethical guidelines and regulations (reference number: BUTH/REC-27295). Participation was voluntary, informed consent and assent were obtained from students, and confidentiality/anonymity assured.

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REFERENCES

1. World Health Organization. Mental disorders: Fact sheet. (2022)
<https://www.who.int/news-room/fact-sheets/detail/mental-disorders>

2. Obilade TT, Koleoso PO, Nwenendah-Mpi EW. An investigative study on the causes of depression and the coping strategies among clinical medical students in private universities in North Central Nigeria. *BMC psychiatry*. 2024 Oct 23;24(1):726.
3. Chen T, Ou J, Li G, Luo H. Promoting mental health in children and adolescents through digital technology: a systematic review and meta-analysis. *Frontiers in Psychology*. 2024 Mar 12;15:1356554.
4. Balcombe L, De Leo D. The impact of YouTube on loneliness and mental health. *InInformatics* 2023 Apr 20 (Vol. 10, No. 2, p. 39). MDPI.
5. Naslund JA, Bondre A, Torous J, Aschbrenner KA. Social media and mental health: benefits, risks, and opportunities for research and practice. *Journal of technology in behavioral science*. 2020 Sep;5(3):245-57.
6. Halsall T, Garinger C, Dixon K, Forneris T. Evaluation of a social media strategy to promote mental health literacy and help-seeking in youth. *Journal of Consumer Health on the Internet*. 2019 Jan 2;23(1):13-38.
7. Kadiri KK, Haroon-Sulyman SO, Kehinde AA, Adejumo PB, Udende P. Social Media Usage for Mental Health Information among University of Ilorin Undergraduates.
8. Ogundipe RO, Omotosho OE, John-Akinola YO. Perception, attitude and use of digital health platforms for mental health promotion among students in a national university in the south-western part of Nigeria: A cross-sectional study. *Digital Health*. 2025 Mar;11:20552076251331841.
9. Ogundipe RO, Omotosho OE, John-Akinola YO. Perception, attitude and use of digital health platforms for mental health promotion among students in a national university in the

450 south-western part of Nigeria: A cross-sectional study. Digital Health. 2025
451 Mar;11:20552076251331841.

452 10. Venkatesh V. Determinants of perceived ease of use: Integrating control, intrinsic
453 motivation, and emotion into the technology acceptance model. Information systems
454 research. 2000 Dec;11(4):342-65.

455 11. Ekoh PC, Nnadi F, Nwabineli H, Oyinlola O, Odo C, Okolie TJ, Onuh SC, Ugwu EO,
456 Bhatta K, Onalu C. Barriers to the use of mental health services amongst men in Nigeria
457 and the potential of digital mental health support. Advances in Mental Health. 2024 Sep
458 1;22(3):590-602.

459 12. Cochran WG, Cochran WG. Sampling techniques. New York: wiley; 1977 Jul.

460 13. Ogedengbe Mrs OE, Quadri Mr GO. The use of social media by undergraduates in South-
461 west Nigeria: a comparative study.

462 14. Ojo YA, Ajayi SA, OLAJIDE A, OJO O. Social media addiction among selected Nigerian
463 adolescents' university undergraduates.

464 15. Agbejule OO. *Implication of social media on interpersonal communication among*
465 *students of the faculty of basic medical and health sciences. Bowen Sciences, Bowen*
466 *University* (Doctoral dissertation, Bowen University, Iwo).

467 16. Oyewole TG, Adegoke JA. Effect of the Internet on the Reading Habit and Academic
468 Performance of Under-graduate Students: A Case Study of Bowen University, Iwo.
469 International Journal of Education and Evaluation. 2018;4(4):88-99.

470 17. Berry N, Emsley R, Lobban F, Bucci S. Social media and its relationship with mood, self-
471 esteem and paranoia in psychosis. Acta Psychiatrica Scandinavica. 2018 Dec;138(6):558-
472 70.

18. Lipson SK, Phillips MV, Winkquist N, Eisenberg D, Lattie EG. Mental health conditions among community college students: A national study of prevalence and use of treatment services. *Psychiatric services*. 2021 Oct 1;72(10):1126-33.
19. Hilty DM, Chan S, Torous J, Luo J, Boland RJ. Mobile health, smartphone/device, and apps for psychiatry and medicine: competencies, training, and faculty development issues. *Psychiatric Clinics*. 2019 Sep 1;42(3):513-34.
20. Wasil AR, Venturo-Conerly KE, Shingleton RM, Weisz JR. A review of popular smartphone apps for depression and anxiety: assessing the inclusion of evidence-based content. *Behaviour research and therapy*. 2019 Dec 1;123:103498.
21. Resnick SG, Oehlert ME, Hoff RA, Kearney LK. Measurement-based care and psychological assessment: Using measurement to enhance psychological treatment. *Psychological Services* 2020 17(3), 233–237.
22. Keles B, McCrae N, Grealish A. A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. *International journal of adolescence and youth*. 2020 Dec 31;25(1):79-93.
23. Coyne SM, Rogers AA, Zurcher JD, Stockdale L, Booth M. Does time spent using social media impact mental health?: An eight year longitudinal study. *Computers in human behavior*. 2020 Mar 1;104:106160.
24. Boyd D. *It's complicated: The social lives of networked teens*. Yale University Press; 2014 Sep 29.

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