

Mental Health Disorders Among the Adolescent Population in Nigeria: An Integrative Review

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Submitted to the

Faculty of Liberty University

In partial fulfillment of

The requirements for the degree

Of Doctor of Nursing Practice

By

Njideka Nkemjika Emenyi

Liberty University

Lynchburg, VA

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Abstract

Mental illness is a public health crisis with extensive stigma that has been substantially neglected in Nigeria. The general belief in Nigeria is that mental illness originates from supernatural causes such as possession of evil spirits; hence, individuals with mental illness are left in the hands of “the gods” or traditional healers for help. The prevalence of mental health disorders is high amongst adolescents in Nigeria due to rapid biological, social, and psychological changes that increase their susceptibility to mental health complications. Despite the high prevalence of mental illness among Nigerian adolescents, mental health care access and utilization in this population continue to remain low. The purpose of this integrative review is to evaluate available evidence regarding mental health issues among the adolescents in Nigeria and to identify some of the barriers to utilization of mental health services and mental health–related interventions. This integrative review utilized Whittemore and Knafl’s framework. The review showed a high prevalence of mental health disorders and suicidal behaviors among the adolescent population in Nigeria. The review also revealed multiple risk factors for the development of mental illness among this population. In addition, the review highlighted low mental health literacy, mental illness stigma, poor mental health facilities, and lack of mental health providers as some of the barriers to seeking care among the adolescents in Nigeria. Finally, mental health literacy programs, role play, and social contacts were identified as some of the effective mental interventions among this population. The review elucidated the need to develop an effective model for prevention and early detection of mental health disorders among adolescents in Nigeria.

Keywords: mental illness, mental health disorder, adolescents, mental health literacy, Nigeria

Dedication

This manuscript is dedicated to my wonderful and awesome mother, Mrs. Eunice Anekwe, whose fervent prayers and tireless support enabled me to complete this project.

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My sincere worship and gratitude go to God the Father, God the Son, and God the Holy Spirit for enduing me with divine wisdom and power to complete this DNP journey. It was not an easy process, but God's grace was indeed sufficient unto me. I am highly indebted to my DNP chair, Dr. Cynthia Goodrich; you are indeed an ordained educator sent for the time that we are in. Thank you so much, Dr. Goodrich, for your prayers, direction, and timely feedback.

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List of Abbreviations

Attention-deficit/hyperactivity disorder (ADHD)

Doctor of Nursing Practice (DNP)

Institutional Review Board (IRB)

Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA)

Cumulative Index of Nursing and Allied Health Literature (CINAHL)

Rapid Critical Appraisal (RCA)

Integrative Review (IR)

SECTION ONE: FORMULATING THE REVIEW QUESTION

Mental illness is a worldwide public health crisis with harmful personal, social, and financial consequences (Krendl & Pescosolido, 2020; Oduguwa et al., 2017; Sickel et al., 2019). Mental illness is associated with considerable burden and adverse human, economic, and social effects (Knaak et al., 2017; Morgan et al., 2018; Patel et al., 2018; Vigo et al., 2016). Mental health disorders are a major driver of the progression of overall morbidity and disability worldwide (Vigo et al., 2016). Evidence suggests that the worldwide burden of mental illness is about 32.4% of years lived with disability and 13.0% of disability-adjusted life-years (Vigo et al., 2016). Despite these documented deleterious effects of mental illness, global policy makers have failed to prioritize treatment and care for individuals with mental illness. Consequently, individuals with mental illness worldwide do not have access to adequate care. Several factors have been linked to the inadequate care received by individuals with mental illness, including but not limited to low mental health literacy, inadequate resources including providers, and stigma (Krendl & Pescosolido, 2020).

Stigma and discrimination have been documented as two of the most significant obstacles to care for individuals and families with mental illness (Heim et al., 2020; Thornicroft et al., 2016). *Stigma* generally refers to the act of discrediting, degrading, or disgracing an individual because of attributes the individual possesses and leads to harmful social experiences such as discrimination, isolation, rejection, and marginalization (Subu et al., 2021). Mental health stigma takes the form of negative thoughts, beliefs, social disapproval, and prejudiced behaviors toward people with mental illness or those receiving mental health services (DeFreitas et al., 2018; Subu et al., 2021). The stigma attached to mental illness is a widespread phenomenon that cuts across different races, ethnicity, age groups, and religious affiliations. Mental illness stigma affects the

rate of help-seeking and hence development of effective treatment plan for people with mental illness.

Research has identified numerous forms of mental health–related stigma, including but not limited to self-stigma, public stigma, perceived stigma, professional stigma, and institutional stigma (Subu et al., 2021). *Self-stigma*, also known as *internalized stigma*, refers to negative attitudes of an individual toward his/her own mental illness. *Public stigma* refers to negative attitudes toward people with mental illness held by the public and usually results from values, beliefs, misconceptions, fear, and prejudice (Subu et al., 2021). *Perceived stigma* describes an individual’s beliefs about the attitudes of others toward a mental health disorder. *Professional stigma* occurs when health care professionals hold negative attitudes toward their patients or experience stigma from the public or other health care professionals because of their connection with individuals with mental illness. Similarly, *institutional stigma* refers to an organization’s policies or culture of negative attitudes and beliefs toward individuals with mental illness (Subu et al., 2021)

Reduction of mental illness stigma is important for improved outcomes in people with mental health disorders, especially in low- and medium-income countries (Clay et al., 2020). Several evidence-based strategies for reducing the stigma of mental illness have been documented, including but not limited to mental health literacy education, contact-based interventions, and role plays (Ahmed et al., 2020; Aluh et al., 2019; Morgan et al., 2018; Zhang et al., 2022). Literature suggests that mental health stigma is associated with low mental health literacy (Tuijnman et al., 2019). Mental health literacy is defined as “knowledge and beliefs about mental disorders which aid their recognition, management, or prevention” (Tuijnman et al., 2019, p. 2). Mental health literacy consists of the capacity to identify specific disorders,

knowledge of risk factors and causes, and the ability to seek mental health information and professional help (Furnham & Swami, 2018). The effectiveness of mental health literacy in reducing stigma has been well documented in literature (Chisholm et al., 2016; Sweileh, 2021).

The prevalence of mental health disorders is higher among young people than persons at any other stage of the development (Aguirre Velasco et al., 2020), with up to 20% of adolescents suffering from mental illness. Research suggests that adolescence is a vulnerable stage of development with about 50% of mental health disorders starting before the age of 14 and about 75% before the age of 18 (Aguirre Velasco et al., 2020). Adolescents experiencing mental health disorders often face numerous challenges such as isolation, stigma, prejudice, and difficulty in accessing health services (Aguirre Velasco et al., 2020). Depression and anxiety are amongst the most common mental health disorders experienced by adolescents. A proper understanding of the obstacles to and mediators of help-seeking is essential for the development of interventions to help adolescents with mental health conditions (Aguirre Velasco et al., 2020).

Mental health is a public health crisis with extensive stigma that has been substantially neglected in Nigeria (Labinjo et al., 2020). Studies in Nigeria have revealed widespread lack of knowledge about mental health disorders and negative attitudes toward people with mental illness (Aluh et al., 2018). The general belief in Nigeria is that mental illness originates from supernatural causes such as possession of evil spirits, sorcery, witchcraft, and divine punishment; consequently, traditional healers and spiritual leaders are typically the first point of consultation for those suffering from a mental illness (Aluh et al., 2018; Labinjo et al., 2020; Lasebikan, 2016). Mental illness is viewed as terrifying, disgraceful, and incurable; hence, mentally ill persons are highly stigmatized and isolated from the general population (Labinjo et al., 2020). Also, the stigma attached to mental disorders is rarely discussed openly, which results in severe

misunderstanding and prejudice. Furthermore, the causal beliefs held by Nigerians along with low public awareness and stigmatization of mental health disorders seriously impact help-seeking behaviors and utilization of mental health services (Jombo et al., 2019). Consequently, individuals with mental illness face significant barriers to accessing and utilizing mental health services (Pederson et al., 2020)

Help-seeking is critical to individuals' ability to access and utilize mental health services. However, in Nigeria, individuals with mental health disorders often delay or avoid seeking help because of stigmatization and poor mental health literacy. Consequently, poor help-seeking behaviors have been linked to mental health stigma and poor mental health literacy in Nigeria. Evidence suggests that high mental health literacy is associated with improved help-seeking and utilization of mental health services (Shahwan et al., 2020). Therefore, interventions directed at increasing knowledge about mental illness can produce a significant positive change in the perceptions of mental health disorder (Jombo et al., 2019).

Adolescence (ages 10–19 years) is a distinctive developmental phase (World Health Organization, 2018) associated with rapid biological, social, and psychological changes that increase individuals' susceptibility to mental health complications (Sawyer et al., 2018). Mental health disorders are one of the leading causes of disability worldwide; among adolescents, they account for about 16% of the worldwide burden of disease and injury and 45% of years lost due to disability (Ajike et al., 2022; World Health Organization, 2018). Also, mental illness is a major contributing factor to high suicide rates in adolescents (Steck et al., 2018). Research suggests a strong association between mental health disorders and many other health and development issues for adolescents in Nigeria (Ajike et al., 2022). Despite the high prevalence of mental illness among Nigerian youths, mental health care access and utilization in this

population remains low (Ajike et al., 2022). Also, policy makers have failed to prioritize efforts to improve young people's perceptions of mental health issues and services in Nigeria (Aluh et al., 2019). Current evidence indicate that young people face numerous obstacles to accessing mental health services in Nigeria, including poor mental health knowledge, stigma, lack of providers, and poor mental health financing/facilities (Ajike et al., 2022; Gronholm et al., 2017). While there is a growing body of literature on mental health illness and the mental health literacy of adults in Nigeria, there is a dearth of evidence on mental illness and mental health literacy among adolescents in Nigeria (Aluh et al., 2018). The purpose of this review is to evaluate available literature on mental illness and mental health literacy among adolescents in Nigeria and identify some of the barriers to utilization of mental health services and mental-health related interventions to improve help seeking.

Defining Concepts and Variables

The concepts and variables applied in this integrative review (IR) include mental illness, mental health stigma, mental health literacy, obstacles/barriers, adolescents, and help seeking.

Adolescents, according to the World Health Organization (2018), is any person between the ages 10 and 19. For this review, this definition is considered as appropriate and is utilized as the operational definition.

Help-seeking can be conceptualized as

a dynamic process, which starts with the consciousness of problems that may require help, followed by the manifestation of symptoms, and need for support, then the identification of available help sources, and finally the readiness to seek help and disclose relevant information. (Xu et al., 2018, p. 2658)

The operational definition of *help-seeking* for this review is the action of actively seeking help for mental health problems from formal (medical providers) or informal (family, friends, or community) sources.

Mental health barriers/obstacles are any condition, hindrance, or impediment that prevents individuals from seeking and utilizing mental health services (Byrow et al., 2020). For this review, *mental health obstacles/barriers* are any condition or belief that would deter individuals with mental illness from seeking for care.

Mental health literacy is defined as “knowledge and beliefs about mental disorders which aid their recognition, management, or prevention” (Tuijnman et al., 2019, p. 2). The operational definition of *mental health literacy* is the understanding of the causes and symptoms of mental illnesses and the recognition of the need to seek help and available resources.

Mental health stigma refers to “having negative thoughts, beliefs, and discriminatory behaviors towards individuals with mental illness or those receiving mental health services” (DeFreitas et al., 2018, p. 1). The operational definition of *mental health stigma* for this review is the presence of negative thoughts and prejudiced behaviors toward individuals with mental illness.

Mental illness is conceptually defined as “any condition that significantly affects the cognition, behavior, perception and emotions of the affected person” (Addo et al., 2018, p. 2). For this review, *mental illness* is operationalized as any condition that leads to psychological and behavioral disturbances in an individual.

Rationale for Conducting the Review

Despite the high prevalence of mental illness among Nigerian youths, little research has been done about young people’s perceptions of mental health issues and services in Nigeria

(Aluh et al., 2019). Also, there is a paucity of evidence on the obstacles to utilization of mental health services and interventions to improve help-seeking among this population. The rationale for conducting this review is to evaluate available evidence regarding mental health issues and mental health literacy among adolescents in Nigeria and identify some of the barriers to utilization of mental health services and mental health-related interventions to improve help-seeking.

Purpose and/or Review Question(s)

The purpose of the review is to assess the prevalence of mental health disorders among the adolescents in Nigeria, evaluate the barriers to the utilization of mental health services, and identify some mental health-related interventions to improve help-seeking. The review questions are:

1. What are the common mental health issues among adolescents in Nigeria?
2. What are the obstacles/barriers to utilization of mental health services among adolescents in Nigeria?
3. What mental health interventions have proved to be effective among adolescents in Nigeria?

Formulate Inclusion and Exclusion Criteria

The review included research articles that examined common mental health disorders among adolescents in Nigeria and barriers to the utilization of mental health services. Studies that evaluated the effectiveness of mental health interventions among adolescents in Nigeria were also included. The interventions could be school based, community based, or government initiatives, and the study participants were ages 10 to 19. Furthermore, to be included in this review, articles must be written in English, published within the last 10 years, and peer reviewed.

Exclusion criteria were articles written in other languages, not peer reviewed, written prior to 2012, and including subjects older than 19 years. Inclusion and exclusion criteria are summarized in Table 1.

Table 1

Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion
Publication year	2012 to 2022	Prior to 2012
Subjects	Adolescents 10 to 19 years old	Children and adults
Type of article	Peer reviewed	Non-peer reviewed
Language	English	Other languages
Text availability	Full text	Abstract only

Conceptual Framework

It is important that every IR demonstrates the same standards of rigor seen in other types of research (Whittemore & Knafl, 2005). The step-by-step systematic review approach developed by Cooper (1998) and elaborated on by Whittemore and Knafl (2005) provided the conceptual framework for this IR. In addition, the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) was utilized for articles screening and selection (Liberati et al., 2009). The framework assisted in the identification of the problem, literature search, data evaluation, data analysis, and data presentation.

Whittemore and Knafl's Framework

According to Whittemore and Knafl's (2005) framework, the first stage of conducting an integrative review is a clear identification of the problem. For this review, the problem is a dearth of evidence on mental health disorders, mental health literacy, barriers to care, and effective mental health interventions among adolescents in Nigeria, leading to poor mental health outcomes (Aluh et al., 2018). Next, a comprehensive and purposeful literature search using

digital databases is conducted. The literature search process is clearly detailed in the method section, which provides the search terms and databases used, additional search strategies, and the literature inclusion and exclusion criteria. The final sample of articles from the literature search was evaluated using Melynk's level of evidence, representing the third stage of the conceptual framework. The fourth stage of the framework is data analysis, which was conducted through a literature matrix, thematic analysis, and synthesis. The final stage of the conceptual framework is data presentation. The results of this IR provide a detailed information on the depth and breadth of mental health issues among adolescents in Nigeria as well as contribute to a new understanding of the phenomenon. This review also discusses the implications for practice, research, and policy initiatives. Finally, the limitations of the study are to be enumerated in the review.

Preferred Reporting Items for Systematic Reviews and Meta-Analysis

The PRISMA Statement is an evidence-based set of recommendations created mainly to promote transparent and comprehensive reporting in systematic reviews. The guidelines were developed to assist authors with proper, accurate, and transparent reporting of various knowledge synthesis procedures. In other words, the PRISMA Statement is a road map to help researchers best explain what was done, how it was done, and what was found (Sarkis-Onofre et al., 2021). The PRISMA consists of a 27-item checklist and a diagram of four phases: identification of records, screening and removal of duplicates, eligibility assessment of full-text articles, and inclusion of final studies selected for synthesis (Liberati et al., 2009). The PRISMA checklist was used as a framework to organize, screen, eliminate, and finalize the articles reviewed.

DNP Essentials

The Doctor of Nursing Practice (DNP) scholarly project is an essential element of the

DNP curriculum (Moran et al., 2017). The American Association of Colleges of Nursing (2006) outlined eight essentials for doctoral prepared nurses. For this IR, the DNP essentials met were: Essential I, Essential III, Essential IV, Essential V, and Essential VII (see Appendix A).

SECTION TWO: COMPREHENSIVE AND SYSTEMATIC SEARCH

Search Organization and Reporting Strategies

A good and effective literature search should be organized, comprehensive, and performed by utilizing appropriate search terms and sources. To effectively conduct an IR of mental health disorders among adolescents in Nigeria, the researcher completed a systematic electronic literature search through remote access to the Liberty University Jerry Falwell Library with the professional assistance of the librarians. The PRISMA flow diagram was used to organize, screen, eliminate, and finalize the articles for review (Appendix B). In addition, a literature evidence table was developed to compare the relevance of the articles and levels of evidence based on Melnyk's levels of evidence (Appendix C).

Terminology

According to Toronto and Remington (2020), database and search terminology can be very confusing given that words have different meanings to different people in various disciplines. The software used to provide a database is a *platform*, and the word *database* is defined as a “searchable electronic collection of published articles” (Toronto & Remington, 2020, p. 25). The four databases used for this review were the Cumulative Index of Nursing and Allied Health Literature (CINAHL), MEDLINE, PubMed, and Psychology & Behavioral Sciences Collection (EBSCO). Google Scholar was also utilized. CINAHL Plus with Full Text and Psychology & Behavioral Sciences Collection with full text are available on the EBSCO platform, while MEDLINE with Full Text is available on the ProQuest platform

(Toronto & Remington, 2020). The search interface, a page used to search keywords and apply limiters (Toronto & Remington, 2020), was used to conduct an advanced search. Keywords and the Boolean operators *OR* and *AND* were used to narrow the articles. The keywords used for this review were *adolescents, teenagers, mental health, mental illness, mental disorders, psychiatric disorders Nigeria, barrier, and intervention*. The limiters included articles written in English, peer reviewed, and published between 2012 and 2022.

SECTION THREE: MANAGING THE COLLECTED DATA

A detailed search was conducted of four different databases: CINAHL, MEDLINE, PubMed, and Psychology & Behavioral Sciences Collection (EBSCO). The search terms were developed using the review questions, then expanded with synonyms and related subject headings. Truncation was applied within subject headings and the different subject categories were connected with Boolean operator *OR* and between same subject category with *AND*.

The initial MEDLINE search yielded 245 articles, but the number was reduced to 76 articles when limiters were applied. The initial CINAHL search yielded 26 articles, but the number was reduced to 14 when limiters were applied. Similarly, the initial Psychology & Behavioral Sciences Collection search yielded 22 articles, but when limiters were applied, the number was reduced to seven. The initial PubMed Central search yielded 2,297 articles, but the number was reduced to 565 when limiters were applied. A partial gray literature search was also performed in Google Scholar; this search was limited to articles published within the last five years, and only the first 50 relevant articles were reviewed.

A total of 712 articles were identified for screening from all searches. After duplicates and articles without full text were eliminated, a total of 513 remained. These abstracts were reviewed, resulting in 129 full-text articles selected to be screened for eligibility. After careful

review, 114 articles were excluded for several reasons. Studies were excluded if they were not conducted in Nigeria or any sub-Saharan African country, if mental disorders attributable to other physical illness were the focus, if there was no mental health intervention, or if the age of the subjects was outside the range of 10–19 years. Consequently, a total of 16 full-text articles were selected for this IR. An evidence table was created to rank the articles based on Melnyk's level of evidence (Appendix C and Appendix D).

SECTION FOUR: QUALITY APPRAISAL

Sources of Bias

Assessing the potential sources of bias in studies is an important part of interpreting any review (Viswanathan et al., 2018). Assessment of the risk of bias in individual studies and across studies is useful in grading the strength of the studies as well as explaining heterogeneity across studies (Viswanathan et al., 2018). According to Toronto and Remington (2020), bias can occur at any phase of an IR.

Potential forms of bias that can occur in a study include selection bias, measurement bias, attrition bias, performance bias, and publication bias. Selection bias occurs when differences exist between study groups. This risk can be minimized through randomization or blinding (Toronto & Remington, 2020). Measurement bias occurs when there are inconsistencies in the measurement of outcomes due to inadequately trained research personnel or unreliable instruments (Toronto & Remington, 2020). Measurement risk can be minimized through thorough training of research personnel and utilization of validated instruments. Attrition bias occurs when participants drop out of the study. This risk can be minimized by proper reporting of attrition rates (Toronto & Remington, 2020). Performance bias occurs when differences exist between study participants due to some participants receiving more attention than others. This

risk can be minimized by blinding and utilization of standard protocol (Toronto & Remington, 2020). Finally, publication bias occurs when differences exist in the results of published and unpublished studies. According to Toronto and Remington (2020), some journals do not publish studies that are not significant based on the outcome of interest thereby making such studies unavailable for IR.

Qualitative studies, including IRs, can be examined for potential bias by assessing concepts of trustworthiness, including the transferability of findings to other settings, the credibility of the study, the dependability of the methods, and the confirmability of the data (Toronto & Remington, 2020). For this IR, potential forms of bias including selection, measurement, performance, and publication bias were minimized through the use of an evidence table based on Melnyk's levels of evidence (Appendix C) and the PRISMA flow diagram (Appendix B).

Internal Validity

Internal validity is the extent to which observed differences in dependent variable are directly related to the independent variable (Clemens et al., 2021). Internal validity is established when differences in a dependent variable can be attributed to an independent variable rather than other exogenous or endogenous causes (Clemens et al., 2021). Validity is demonstrated when the results of a study are obtained through established scientific methods. Bias can affect the validity of IRs and lead to under- or overestimation of results (Toronto & Remington, 2020). For this IR, the internal validity was evaluated using the evidence table appraisal tool based on Melnyk's level of evidence (Appendix C and Appendix D).

Appraisal Tool (Literature Matrix)

According to Toronto and Remington (2020), studies included in any IR should be critically appraised. Critical appraisal tools enable researchers to objectively evaluate the strengths and weaknesses of studies (Melnik & Fineout-Overholt, 2015). However, the process of selecting the best appraisal tool to evaluate literature for an IR can be very challenging. There are several critical appraisal tools used in nursing, but for this IR, the rapid critical appraisal (RCA) checklist was utilized (Buccheri & Sharifi, 2017; Melnyk & Fineout-Overholt, 2015). The RCA evaluates the worth of a study based on its validity, reliability, and applicability to clinical practice (Fineout-Overholt et al., 2010; Melnyk & Fineout-Overholt, 2015). In addition, the RCA enables the researcher to review each study to identify the level of evidence, sample, purpose, study design, and usefulness in practice. For this IR, the RCA checklist was utilized to develop the literature matrix table (Appendix C).

Applicability of Results

The applicability of an IR also known as its external validity, which is the degree to which the study results can be generalized to the population of interest (Toronto & Remington, 2020). Bias can affect the validity of IRs and lead to under- or overestimation of results, causing problems with generalizability of the findings (Toronto & Remington, 2020). The applicability (generalizability) of this IR is addressed through the discussion of the various study limitations in the literature matrix and the limitations of the review in its entirety.

Reporting Guidelines

IRs should demonstrate transparency in reporting by following established guidelines. Reporting guidelines such as the PRISMA provide recommendations for proper, accurate, and transparent reporting of various knowledge synthesis procedures and minimizing bias (Toronto

& Remington, 2020). The PRISMA guidelines were created mainly to increase quality of systematic reviews by promoting transparent and comprehensive reporting (Toronto & Remington, 2020). For this IR, the PRISMA guidelines were utilized to organize, screen, eliminate, and finalize the articles for review (Appendix B). Similarly, the Whittemore and Knafl (2005) framework was utilized to delineate the data collection, extraction, evaluation, analysis, and synthesis processes for this IR.

SECTION FIVE: DATA ANALYSIS AND SYNTHESIS

The data analysis and synthesis section of this IR describes the creation of a data matrix utilizing the Melnyk's levels of evidence for the 16 articles employed in this review (Appendix C). The section also includes a descriptive analysis of the articles included in the IR, a synthesis of the results, ethical considerations, and the timeline for the scholarly project.

Creating a Data Matrix

One important step in data analysis is the creation of a literature matrix, a structured document that supports the analysis and synthesis of data (Garrard, 2020). The table consists of rows and columns; column headers comprise author, study design/sample, level of evidence, data collection methods, findings, and relevance of study (Garrard, 2020; Toronto & Remington, 2020). For this IR, a literature matrix of 16 articles was completed (Appendix C).

Data Analysis Methods (Thematic Analysis)

Data analysis in IRs requires that the data from primary sources are ordered, grouped, and summarized into a cohesive and integrated conclusion to answer the review questions (Whittemore & Knafl, 2005). For this IR, the thematic analysis method was adopted due to its flexibility in identifying, analyzing, and reporting patterns observed in a given data set (Toronto & Remington, 2020). The method is used to organize and categorize recurrent or important

themes across multiple literature sources. There are six phases of thematic analysis: data familiarization, initial code generation, searching for themes, theme review, definition and naming of themes, and production of report (Toronto & Remington, 2020).

For this IR, the first stage of the thematic analysis was the creation of a literature matrix of the 16 articles. The column headers in the matrix were Article Title/Author, Study Purpose, Sample/Methods, Level of Evidence, Interventions/Outcomes, Results, and Study Strengths and Limitations (Appendix C). The creation of the matrix enabled the process of data immersion as well as organization and identification of recurrent themes. The next stage comprised categorizing, analyzing, and synthesizing data under the identified themes. The final step of the thematic analysis was the production of a narrative report of the identified themes related to mental health disorders among adolescents in Nigeria. For this IR, the themes identified were low mental health literacy, mental health interventions, prevalence of mental health disorders, risk factors for mental health disorders, barriers to mental health services utilization, and prevalence of suicidal behavior.

Descriptive Results

A total of 16 articles were utilized for this IR; all the studies were quantitative, and they varied in research design. Most of the articles were Level VI studies according to Melnyk's framework; this is attributed to the lack of research in this area, hence the need for this review. There was one systematic review (Cortina et al., 2012), one randomized controlled trial (Oduguwa et al., 2017); two quasi-experimental studies (Atilola et al., 2022; Bella-Awusah et al., 2014), one correlational study (Adubale, 2017), eight cross-sectional studies (Adeosun, 2016; Adewuya & Oladipo, 2020; Aluh et al., 2018; Fakunmoju & Bammeke, 2015; Nyundo et al., 2020; Obimakinde et al., 2019; Oderinde et al., 2018; Umar et al., 2018), two retrospective

descriptive studies (Chukwujekwu, 2019; Ogbonna et al., 2020), and one single qualitative study (McCann et al., 2016). Table 2 displays the levels of evidence represented by these studies.

Table 2

Table of Descriptive Results

Type of Publication	#	LOE
Systematic review	1	I
Randomized controlled trial	1	II
Quasi-experimental study	2	III
Correlational design	1	IV
Cross-sectional design	8	VI
Retrospective descriptive	2	VI
Single qualitative	1	VI

Two articles discussed low mental health literacy among adolescents; three articles examined effective mental health interventions. Five articles covered the prevalence of mental health disorders among adolescents in Nigeria, while three articles discussed the risk factors for the development of mental health disorders among adolescents. Finally, one article covered barriers to seeking care, and two articles discussed the prevalence of suicidal behavior among adolescents with mental health disorders in Nigeria.

Synthesis

This IR revealed six themes related to mental health disorders among adolescents in Nigeria: (a) the prevalence of mental health disorders among adolescents in Nigeria, (b) the prevalence of suicidal behavior among adolescents with mental health disorders in Nigeria, (c) risk factors for the development of mental health disorders among adolescents, (d) low mental health literacy among adolescents in Nigeria, (e) the barriers to seeking care, and (f) effective mental health interventions. These themes are discussed in detail in the following sections.

Prevalence of Mental Health Disorder Among Adolescents

Research has indicated that the most common mental health conditions among adolescents include depression, anxiety disorders, attention-deficit/ hyperactivity disorder (ADHD), substance use disorder, and conduct disorders (Nair et al., 2017; Nalugya-Sserunjogi et al., 2016). In Nigeria, a few studies have been conducted on the prevalence of psychiatric disorders. In a retrospective study conducted by Ogbonna et al. (2020) on the prevalence of mental illness among adolescents treated at Federal Neuropsychiatric Hospital, Enugu, Nigeria, the authors showed that from 2004 to 2013, schizophrenia was the most common mental disorder, followed by neurodevelopmental disorders, bipolar disorder, and depressive disorders. The study also revealed a substantial gender difference in the prevalence of mental illnesses, with higher rates among male adolescents (Ogbonna et al., 2020).

In a study by Chukwujekwu (2019) on the patterns of childhood and adolescent psychiatric disorders, the author demonstrated ADHD to be the most common disorder among adolescents, followed by depression. The study also revealed substantial gender differences in the prevalence of mental illnesses, with higher rates among male adolescents (Chukwujekwu, 2019). Similarly, Oderinde et al. (2018), in a study on the prevalence and predictors of depression among adolescents, revealed a high one-month prevalence of depression among adolescents. The authors also listed lower socioeconomic class, single parenthood, polygamous family setting, maternal death, and witnessing of frequent violence and sexual abuse as predisposing factors to the development of depression among the adolescents surveyed (Oderinde et al., 2018).

Further supporting the prevalence of mental health disorders among adolescents in Nigeria, Umar et al. (2018), in a study on the prevalence of ADHD among adolescent students,

found the rate of ADHD to be 8.8% among the population surveyed. This result is consistent with findings from similar studies worldwide, which have found prevalence rates of 6% to 13%. The study also revealed that higher prevalence of ADHD is associated with younger age, functional impairment, and use of psychoactive substances by parents (Umar et al., 2018). Furthermore, Cortina et al. (2012), in a systematic analysis of the prevalence of child mental health problems in community settings in sub-Saharan Africa (including Nigeria), demonstrated that adolescent mental health problems are common in the region. The study showed a total adjusted prevalence of general mental health disorders of 14.5% in children and adolescents up to age 16 years. In addition, the study listed depression, anxiety, and posttraumatic stress disorder as some of the most common disorders among adolescents.

Prevalence of Suicidal Behavior Among Adolescents with Mental Health Disorder

Suicide, a major worldwide concern is the second leading cause of death among adolescents worldwide (Adewuya & Oladipo, 2020). Although suicide is preventable, about 79% of suicides occur in low- and middle-income countries (LMICs) where resources and personnel to help are limited. Mental health and behavioral disorders are risk factors for suicide among the adolescent population (Adewuya & Oladipo, 2020). In Nigeria, studies have shown that suicidal behaviors are associated with several factors including family disruption, mental health disorders and physical abuse (Omigbodun et al., 2008). Adewuya & Oladipo (2020) conducted a study on the prevalence and associated factors for suicidal behaviors among adolescents in Lagos, Nigeria. The study revealed a high one-month prevalence level of suicidal behavior among adolescents (6.1% for suicidal ideation, 4.4% for suicidal plan, and 2.8% for suicidal attempt). The authors also identified mental health problems (depression, anxiety, and behavioral

problems) as associated factors for suicidal behavior among this population (Adewuya & Oladipo, 2020).

Similarly, Nyundo et al. (2019), conducted a cross sectional study to assess the factors associated with depressive symptoms and suicidal ideation and behaviors amongst sub-Saharan African adolescents aged 10-19 years. The study was conducted from eight sites in six countries (Nigeria, Uganda, Ethiopia, Tanzania, Ghana, and Burkina Faso). The authors showed a high 12-month prevalence of suicidal behavior in all the sites ranging between 1.2% and 12.4% (Nyundo et al., 2019). Also, mental health disorder, mainly depression was found to be strongly associated with increased risk for suicidal behavior.

Risk Factors for Mental Health Disorders in Adolescents

Several factors affect adolescents' mental health, including but not limited to social environment, parental relationships, and socioeconomic variables. An adolescent that grows up without parental supervision is at risk of developing mental illness (Altay & Gure, 2012). Similarly, authoritarian parenting style has been shown to lead to antisocial behaviors in adolescents while authoritative parenting style mixed with affection facilitates adolescents' emotional stability and deter adolescents from participating in peer-pressured dangerous behaviors (Altay & Gure, 2012). Obimakinde et al. (2019) conducted a descriptive cross-sectional study to assess the impact of parenting styles and sociodemographic factors on the development of mental disorders among adolescents in secondary schools in Southwest Nigeria. The study demonstrated that adolescents that perceived their parents as authoritarian experienced peer problems (4.9%), conduct problems (9.4%), hyperactivity problems (0.7%), and emotional problems (14.3%); they also lacked prosocial behaviors (Obimakinde et al., 2019). Conversely, adolescents that perceived their parents as authoritative with affection exhibited fewer emotional

and peer problems. Also, adolescents of a lower socioeconomic status experienced conduct (88.8%) and emotional (73.2%) problems more frequently than those of a higher socioeconomic status. The authors concluded that a favorable parenting style and socioeconomic resources provide protective factors to adolescents.

Adubale (2017) confirmed this finding in a study that evaluated parenting styles as predictors of anxiety and depression in secondary school students in Edo State, Nigeria. The result revealed a direct relationship between authoritarian and permissive parenting styles and anxiety and depression and an indirect relationship between an authoritative parenting style and anxiety/depression (Adubale, 2017).

Similarly, Cortina et al. (2012) demonstrated that the most significant risk factors for the development of psychiatric disorders in adolescents in sub-Saharan Africa include maternal psychopathology, family disruption, exposure to stressful events, and low socioeconomic status. Adolescents from broken homes, those that have experienced traumatic events such as physical or sexual abuse, and those from poor families were at increased risk of developing mental health disorders (Cortina et al., 2012).

Research has linked physical abuse to both externalizing behaviors (such as physical aggression) and internalizing reactions (such as anxiety and depression; Radell et al., 2021). In Nigeria, parents and teachers recognize physical discipline as an essential part of cultural and religious responsibilities in child-rearing. Parents and teachers are likely to physically discipline the children for violating established rules as a means of preventing future violations. The problem with this approach is the generation of negative cognitive and affective responses from children. Exposure to physical abuse has neurosensory and neurobiological consequences (Fakunmoju & Bammeké, 2015). A cross-sectional descriptive study conducted by Fakunmoju

and Bammeke (2015) on the relationship between physical abuse at home and school and the development of anxiety and depression among adolescents in Southwest Nigeria showed a positive correlation between physical abuse by parents and development of anxiety ($r = .356, p = .01$) and depression ($r = .253, p = .01$) disorders. The authors argued that all forms of physical abuse should be banned at home and that parents and teachers must be educated on the harmful consequences of physical abuse and the need to utilize alternative, nonviolent forms of discipline (Fakunmoju & Bammeke, 2015). In addition, the authors recommended that screening for parental abuse should be integrated into the secondary school curriculum for early detection and treatment of mental health problems.

Low Mental Health Literacy Among Adolescents

Although mental health disorders in adolescents have been reported as highly prevalent, the rate of seeking care and utilization of mental health services remains low; this has been attributed mainly to low mental health literacy (Schnyder et al., 2017; Seedaket et al., 2020). Mental health literacy has been defined as the knowledge and beliefs about mental illness that can help an individual to identify, manage, and avoid mental disorders (Seedaket et al., 2020). High mental health literacy is associated with reduced stigma and enhanced help-seeking. Recent research in Nigeria has shown that the knowledge of Nigerian adolescents about mental illness in general is low. Aluh et al. (2018) conducted a study to assess the understanding of depression and help-seeking behaviors among adolescent secondary school students in Nigeria. The study, which included 285 secondary school students in Grades 10 to 12 in Southeast Nigeria, utilized vignette cases for clinical and nonclinical depression cases. The findings from the study demonstrated a very low health literacy level among the adolescents surveyed; only 5% of the participants correctly identified and labelled the depression vignette with just 1.5%

recommending professional help. The authors affirmed the urgent need to increase mental health awareness among this population in Nigeria, as increasing mental health literacy would increase help-seeking behaviors (Aluh et al., 2018).

Similarly, Adeosun (2016) conducted a cross-sectional descriptive study to evaluate the understanding of depression and help-seeking in a group of adolescent secondary school students in Lagos, Nigeria. The study, which included 302 secondary school students in Grades 11 and 12 in Southwest Nigeria, utilized vignette cases for depression. The findings from the study revealed a very low health literacy level among the adolescents surveyed; only 10% of the participants correctly identified and labelled the depression vignette with just 6.5% recommending professional help. Adeosun (2016) also acknowledged the crucial need for interventions to increase mental health literacy among the adolescent population in Nigeria. In addition, the author alluded to the effectiveness of public awareness campaigns and school-based interventions at increasing mental health literacy among adolescents (Adeosun, 2016).

Barriers to Seeking Care

Despite rising numbers of adolescents experiencing mental illness, adolescents are often hesitant to seek help for mental health problems (Divin et al., 2018). The result of this delay in help-seeking is increased adverse health outcomes, including but not limited to substance abuse, suicidal behaviors, and premature death (Divin et al., 2018). Barriers to help-seeking among adolescents include stigma, discrimination, social isolation, and difficulty accessing care (Núñez et al., 2021). Evidence abounds of the numerous barriers young people face in accessing mental health services in Nigeria; these include poor mental health knowledge, stigma, lack of providers, and poor mental health financing/facilities (Ajike et al., 2022; Gronholm et al., 2017). McCann et al. (2016), in a study evaluating the help-seeking barriers and facilitators of mental

health and substance use problems in young sub-Saharan migrant youths, identified the stigma of mental illness, low mental health literacy, lack of cultural competency, and financial cost as barriers to help-seeking. The authors concluded that strategies to address help-seeking barriers should consider focusing on neutralizing stigma and improving mental health literacy in sub-Saharan African communities (McCann et al., 2016).

Effective Mental Health Interventions

Adolescence is a crucial period for enhancing mental health behaviors and well-being. Mental health problems in adolescence that remain untreated can continue into adulthood and cause serious mental health impairments. The stigma attached to mental illness has been documented as a major contributor to delays in seeking care among adolescents (Ahmed et al., 2020). It is, therefore, important that quality interventions to enhance adolescents' resilience, reduce stigma, and promote mental well-being be implemented at the family, school, and community levels. Evidence suggests that school- and community-based mental health awareness programs that target the provision of accurate information about the nature of and services for mental health disorders to adolescents contribute to improved symptom recognition and utilization of mental health services among adolescents (Seedaket et al., 2020).

The stigma attached to mental illness is universal and cuts across every race, ethnicity, age group, and religious affiliation. Evidence suggests that mental health stigma is associated with low mental health literacy (Tuijnman et al., 2019). The effectiveness of mental health literacy programs in reducing stigma has been well documented in literature (Chisholm et al., 2016; Sweileh, 2021). All the articles utilized in this review demonstrated the effectiveness of interventions aimed at increasing mental health literacy in reducing mental illness stigma and improving help-seeking. Bella-Awusah et al. (2014), in their study on the impact of a mental

health teaching program on the mental health literacy of 154 secondary school students in Southwest Nigeria, showed that a three-hour mental health awareness session produced significant change in the intervention group compared to the control group. The authors recommended the incorporation of mental health literacy programs into the secondary school curriculum.

In a study conducted by Atilola et al. (2022) on the impact of a school-based training program on depression literacy among a group of adolescents and their teachers in Southwest Nigeria, it was discovered that there was a significant improvement in the three domains of depression literacy (knowledge, attitude, and confidence) among the students and their teachers following the intervention. Also, the students had higher depression literacy scores after intervention in all domains than the teachers. The researchers posited adolescence is the period in which optimal results can be achieved when providing mental health literacy intervention. Similarly, Oduguwa et al. (2017) conducted a randomized control trial with 205 students from five schools in Southwest Nigeria to assess the impact of a three-day mental health training on the knowledge of mental illness and attitude and social distance toward persons with mental illness. The intervention comprised a five-hour mental health training session spaced out over three days, consisting of didactic lecture sessions, group discussions, and role play. The results of the study revealed a positive change in the knowledge and attitude of participants in the intervention group. Also, there was a continuous rise in mean social distance scores from baseline to follow-up in the intervention group, but this change was not significant. The study demonstrated that mental health training and role play are effective and acceptable ways of increasing knowledge of mental illness and improving attitudes toward persons with mental disorders among adolescents in Nigeria.

Ethical Considerations

The project, being an IR, did not involve any human subjects; hence, there were no ethical considerations. The project leader completed the Collaborative Institutional Training Certificate (CITI) training prior to the commencement of this IR as required by Liberty University. A copy of the completion certificate is included as Appendix E. Furthermore, the project leader submitted the project to the Liberty University Institutional Review Board (IRB) for approval. The project was considered exempt by the IRB; the email from the IRB is included as Appendix F.

Timeline

A timeline detailing specific actions and anticipated completion dates was established by the project leader at the beginning of NURS 947 (see Table 3). The project leader anticipates completion of this IR by the end of January 2023, with the submission of the final project to Liberty University's Scholars Crossings by February 2023.

Table 3

Project Timeline

Activity	Completion date
Complete scholarly project proposal	September 2022 (NURS 948)
Proposal defense and IRB application	September 2022 (NURS 948)
Complete draft of Chapters 1-6, submit to chair	October 2022 (NURS 949)
Revise Chapters 1-6	October 2022 (NURS 949)
Submit corrected copy to chair	October 2022 (NURS 949)
Submit final copy to editor	November 2022 (NURS 949)
Final project defense	January 2023 (NURS 950)

SECTION SIX: DISCUSSION

The literature review consisted of the appraisal of 16 articles related to mental health disorders in the adolescent population in Nigeria. This IR was able to reveal the prevalence of

mental illness disorders in adolescents in Nigeria. Common mental health disorders among this population include depression, schizophrenia, anxiety, ADHD, bipolar, and PTSD. These findings are consistent with those from similar studies among adolescent populations in other parts of the world (Silva et al., 2020). Consequently, addressing the mental health needs of adolescents should be a critical component of overall health care planning for this population within a well-defined mental health framework. Similarly, the IR elucidated the high prevalence of suicidal behaviors among adolescents with mental health disorders in Nigeria. In the literature, suicidal behaviors were associated with disruptive family systems, violence, single-parent families, academic difficulties, and mental health disorders. Therefore, the importance of effective adolescent suicide prevention programs in Nigeria that would focus on strategies to identify and refer suicidal adolescents for mental health care cannot be overemphasized (Adewuya & Oladipo, 2020).

Adolescence is an important period for developing the social and emotional strength necessary for mental well-being. As such, protective and supportive environments in the family, school, and community are crucial for the mental health of adolescents (Seedaket et al., 2020). The review confirmed an abysmally low mental health literacy level among adolescents with a resultant negative effect of poor help-seeking. There is therefore an urgent need for evidence-based interventions aimed at increasing mental health literacy and help-seeking behaviors among this population (Adeosun, 2016; Aluh et al., 2018). These results are consistent with findings from similar studies conducted in other low- to medium-income countries and sub-Saharan countries (Heim et al., 2020; Jörns-Presentati et al., 2021).

Mental health disorders in adolescents can be influenced by multiple factors, including social environment, parental relationships and parenting styles, physical abuse, and

socioeconomic variables. Efforts should be made by the families, schools, and the government to provide favorable parenting styles and social environments, functional family systems, and socioeconomic resources that would serve as protective factors for adolescents. Furthermore, the identified barriers to seeking care among this population include the stigma attached to mental illness, low mental health literacy, financial difficulties, and poor access to care. Given these barriers, concerted efforts should be made to institute quality interventions to enhance adolescents' resilience, reduce stigma, and promote mental well-being in the family, at school, and in the community at large. The review highlighted the efficacy of direct contact and school-based mental health awareness programs that target the provision of accurate information about the nature of and services for mental health disorders to adolescents at improving symptom recognition and utilization of mental health services among adolescents (Atilola et al., 2022). These findings are consistent with those from other studies with adolescent populations (Chisholm et al., 2016; Kruger et al., 2020; Yamaguchi et al., 2020).

In conclusion, this IR provided clear answers to the three review questions. Through this IR, common mental health disorders among adolescents in Nigeria were identified. The IR also identified some of the barriers to the utilization of mental health services among this population as well as effective mental health interventions. In addition, the IR affirmed the need for adequate planning of health services for adolescents in Nigeria, including mental health services, which requires an accurate assessment of the health needs of this population. Furthermore, the IR brought to light the significant presence of mental health problems in adolescents in Nigeria and the need for concerted efforts by the government and other stakeholders to develop a working mental health framework that will eliminate barriers and improve help-seeking. This is very

important because mental health problems in adolescence that remain untreated can extend into adulthood and cause significant mental health impairments (Seedaket et al., 2020).

Limitations

A major limitation of this IR stems from the paucity of literature related to the topic. The majority of the articles utilized for this review were Level VI studies (cross-sectional and descriptive studies), and most of the data were collected by self-report questionnaires. Cross-sectional studies do not have the ability to establish causality, and self-reporting may pose a risk of recall bias and misclassification bias.

Implications for Practice and Future Work

The findings of this IR have the capability to impact the identification and management of mental health disorder among adolescents in Nigeria. The findings will provide baseline data for planning and evaluating interventions aimed at reducing the burden of mental health problems in this population. The findings from this IR are useful as an advocacy tool to promote awareness of the mental health burden among this population. Adolescents should be screened and referred for treatment of mental health disorders. There is a need to develop an effective model for the prevention and early detection of mental health disorders among adolescents in Nigeria. Government, school administrators, and parents should work together to reduce these high prevalence rates to improve the mental well-being of the future generation.

This project is an IR. The majority of the articles utilized for this review were Level VI studies (cross-sectional and descriptive studies), and the data collection methods were mostly self-report questionnaires. Cross-sectional studies do not have the ability to establish causality; hence, it would be appropriate to conduct a longitudinal study with well-controlled data collection methods to be able to establish causality. Finally, Nigeria is a very diverse country

with multiple ethnic groups. Most of the studies were conducted in Southwest Nigeria; future research should be conducted with multiple ethnic groups to enable generalization.

Dissemination

The final stage of research is dissemination, a streamlined and intentional method of communicating research findings to a directed audience (Toronto & Remington, 2020). After the successful defense of this IR, the project leader will submit the final edited copy for publication in Scholars Crossings, a repository of the Liberty University electronic library. Dissemination will also be pursued through publication in a peer-reviewed journal that will reach the Nigerian population. In addition, the project leader will pursue the dissemination of findings to the Nigerian Federal Ministry of Health through presentations. Finally, the project leader will endeavor to disseminate the results of this IR through in-person presentations in churches and Nigerian communities in the United States.

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Appendix A

DNP Essentials Met

DNP Essential I: Scientific Underpinnings for Practice

The project leader applied a scientific method to research the phenomenon of interest. Also, analysis of the studies included in this review required analytical knowledge, an important underpinning of scientific knowledge

DNP Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice

The project leader met DNP Essential III by identifying the gap in mental health of adolescents in Nigeria and researching and analyzing available literature on the phenomenon of interest. The plan is to disseminate the findings of this review for the improvement of health outcomes of Nigerian adolescents.

DNP Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care

The project leader utilized technology skills and knowledge in the systematic search and critical evaluation of data throughout the review thereby meeting DNP Essential IV

DNP Essential V: Health Care Policy for Advocacy in Health Care

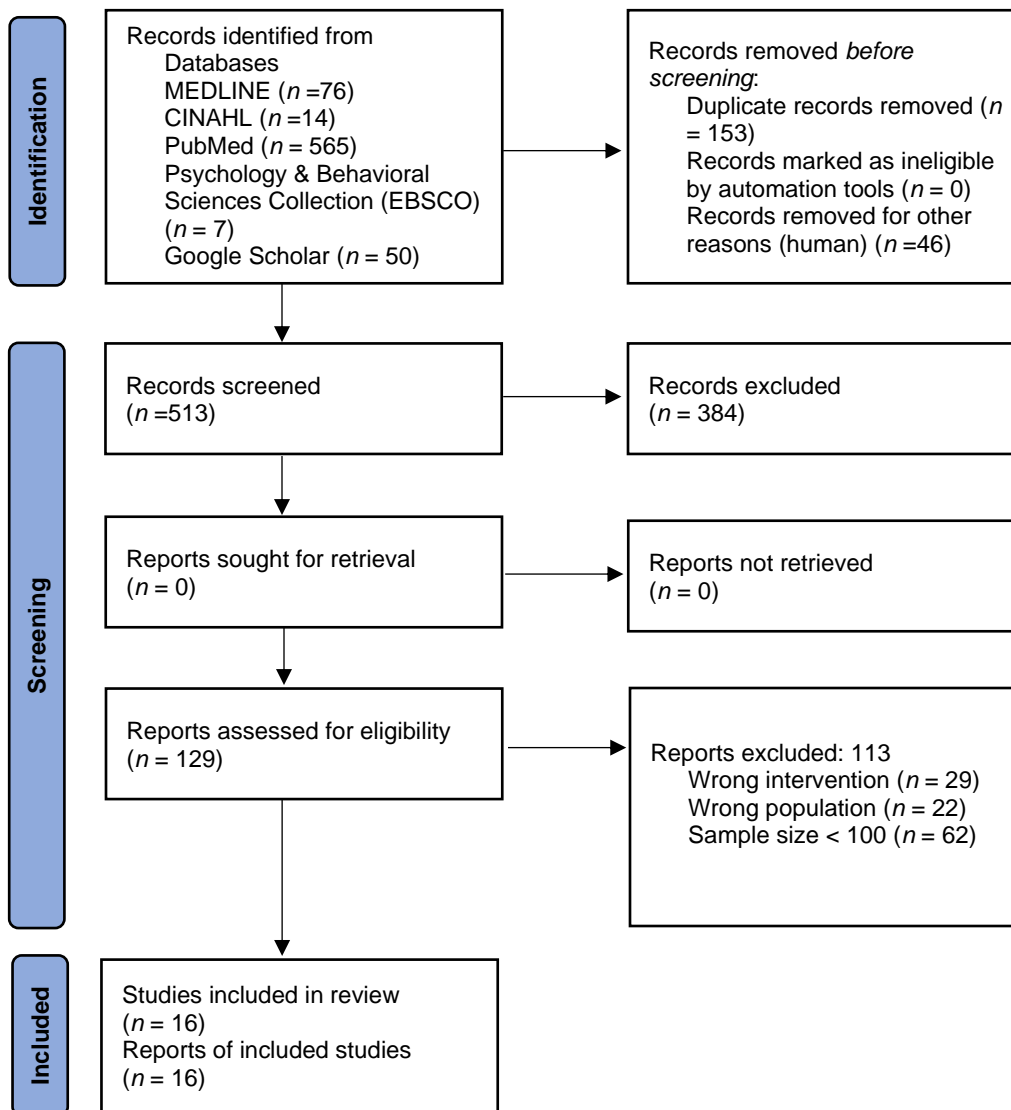
The IR involves assessment of Nigerian mental health policy and advocacy for mental health reform for the adolescent population thereby meeting DNP Essential V

DNP Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health

The project leader addressed DNP Essential VII by examining the obstacles that hinder utilization of mental health services among adolescent population. The project also examined the interventions that can improve mental health of Nigerian adolescent population.

Appendix B

PRISMA Flow Diagram



Adapted from "The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews," by M. J. Page, J. E. McKenzie, P. M. Bossuyt, I. Boutron, T. C. Hoffmann, C. D. Mulrow, L. Shamseer, J. M. Tetzlaff, E. A. Akl, S. E. Brennan, R. Chou, J. Glanville, J. M. Grimshaw, A. Hróbjartsson, M. M. Lalu, T. Li, E. W. Loder, E. Mayo-Wilson, S. McDonald, . . . D. Moher, 2021, *BMJ* 372, Article 71 (<https://doi.org/10.1136/bmj.n71>).

Appendix C

Strengths of Evidence Table

Article Author/Year	Study Purpose/Objectives	Design Sampling, Method, & Subjects	Level of Evidence	Interventions & Outcomes	Results	Study Strengths & Limitations
Adeosun, I. I. (2016). Adolescent students' knowledge of depression and appropriate help-seeking in Nigeria. <i>International Neuropsychiatric Disease Journal</i> , 6(3), 1–6. https://doi.org/10.9734/INDJ/2016/24002	To assess the knowledge of depression and help-seeking in a sample of adolescent secondary school students in Lagos, Nigeria.	Cross sectional descriptive survey, 302 adolescents (Grades 11 and 12), mean age of 15 years, from a secondary school in Southwest Nigeria	Level VI, cross-sectional study	Completion of vignette-based questionnaire (clinical and non-clinical depression cases) Outcome: Increase mental health literacy	The findings from the study revealed a very low health literacy level among the adolescents surveyed; only 10% of the participants correctly identified and labelled the depression vignette with just 6.5% recommending professional help.	<u>Strengths</u> Large sample size <u>Limitations</u> Single site study, relied on the use of brief written case vignettes.
Adewuya, A. O., & Oladipo, E. O. (2020). Prevalence and associated factors for suicidal behaviors (ideation, planning, and attempt) among high school adolescents in Lagos, Nigeria. <i>European Child & Adolescent</i>	To estimate the current (1 month) prevalence and associated factors of suicidal behaviors amongst secondary school	Random sampling, 9441 adolescents (4684 males and 4757 females) with mean age 15.61 years from 47 secondary	Level VI, cross-sectional descriptive study	The Lagos Schools Emotional and Behavioral Health Survey Outcome: suicidal ideation, suicidal plan, suicidal attempt, associated factors	The study revealed a weighted 1-month prevalence for suicidal ideation of 6.1%, suicidal planning was 4.4%, and suicidal attempt was 2.8%. Also, the findings of the study confirmed that suicidal behaviors among adolescents	<u>Strengths</u> Large sample size validated instrument. <u>Limitations</u> Self-administered questionnaires used, might have introduced some elements of bias.

<p><i>Psychiatry</i>, 29(11), 1503–1512. https://doi.org/10.1007/s00787-019-01462-x</p>	adolescents in Lagos, Nigeria	schools in Nigeria			surveyed was significantly associated disruptive family system, experiencing violence, single parent, academic difficulties, and mental health disorders (depression and anxiety)	Also, the study is a cross sectional study hence causality could not be established
<p>Adebale, A. A. (2017). Parenting styles as predictors of anxiety and depression of in-school adolescents in Nigeria. <i>Africa Education Review</i>, 14(3–4), 111–121. https://doi.org/10.1080/18146627.2016.1264864</p>	To evaluate the influence of parenting styles as predictors of anxiety and depression in secondary school students in Edo State, Nigeria.	Multistage random sampling, 240 Junior Secondary School III students from three local governments in Edo, Nigeria	Level IV, correlational research design.	Parenting style scale (PSS), Goldberg depression scale and anxiety scale questionnaires Outcome: Anxiety, depression	The result revealed a direct relationship between authoritarian and permissive parenting styles with anxiety and depression and an indirect relationship between authoritative parenting style and anxiety/depression	<p><u>Strengths</u> Large sample size</p> <p><u>Limitations</u> Self-administered questionnaires might have introduced bias</p>
<p>Aluh, D. O., Anyachebelu, O. C., Anosike, C., & Anizoba, E. L. (2018). Mental health literacy: What do Nigerian adolescents know about depression? <i>International Journal of Mental Health</i></p>	To assess the knowledge of depression and help-seeking behaviors among adolescent secondary school students in Nigeria	Cross sectional descriptive survey, 285 adolescents (grades 10–12) from a secondary school in Southeast Nigeria	Level VI, cross-sectional study	Completion of vignette-based questionnaire (clinical and non-clinical depression cases)	The findings from the study demonstrated a very low health literacy level among the adolescents surveyed; only 5% of the participants correctly identified and labelled the depression vignette with just 1.5%	<p><u>Strengths</u> Large sample size</p> <p><u>Limitations</u> Single site study, relied on the use of brief written case vignettes.</p>

Systems, 12, Article 8. https://doi.org/10.1186/s13033-018-0186-2				Outcome: Increase mental health literacy	recommending professional help.	
Atilola, O., Ayinde, O., Obialo, F., Adeyemo, S. O., Adegbaju, D., & Anthony, R. (2022). Towards school-based mental health programs in Nigeria: The immediate impact of a depression-literacy program among school-going adolescents and their teachers. <i>Child and Adolescent Psychiatry and Mental Health</i> , 16, Article 70. https://doi.org/10.1186/s13034-022-00503-9	To evaluate the impact of a school-based training program on depression-literacy among a cohort of high-school students and their teachers in South-West Nigeria	Non-randomized Pre-post-design. Convenience sample of 3,098 secondary school students from 27 schools in southwest Nigeria, age 11 to 19	Level III, quasi-experimental pre post study	Break Free from Depression, a 4-module depression awareness curriculum Outcome: Mental health literacy	The findings showed that the intervention had significant improvement in the three target domains of depression literacy (knowledge, attitude, and confidence) among the students and their teachers	<u>Strength</u> Large sample, level 111. <u>Limitations</u> Convenience sampling may prevent generalizability
Bella-Awusah, T., Adedokun, B., Dogra, N., & Omigbodun, O. (2014). The impact of a mental health teaching programme on rural and urban	To assess the impact of a school based mental health awareness program at increasing	Non-randomized pre-post-design. Convenience sample of 154	Level III, quasi-experimental study	Intervention group received a three-hour mental health awareness education.	A significant difference in mental health knowledge between the intervention and the control group post-intervention. No	<u>Strengths</u> Level 111 study, adequate sample size <u>Limitations</u> No randomization

secondary school students' perceptions of mental illness in southwest Nigeria. <i>Journal of Child & Adolescent Mental Health</i> , 26(3), 207–215. https://doi.org/10.2989/17280583.2014.922090	mental health literacy and reducing negative perception	secondary school students in Ibadan, southwest Nigeria, age between 10 and 18		Outcome: mental health literacy and perception	difference in perception	
Chukwujekwu, D. C. (2019). Patterns of childhood and adolescent disorders at the university of Port Harcourt teaching hospital: A 3 year review. <i>Journal of Psychiatry and Psychiatric Disorders</i> , 3(1), 23–30.	To study the patterns of childhood and adolescent psychiatric disorders at University of Port Harcourt teaching Hospital (UPTH), Rivers State, Nigeria.	A retrospective descriptive design. 149 children and adolescents, mean age 11.6 years diagnosed with mental illness at UPTH from March 2015 – March 2018	Level VI, retrospective cross-sectional study	Case files of all psychiatric patients aged between 0-19 years who attended the psychiatric clinic of UPTH from March 2015 – March 2018 were reviewed Outcome: prevalence of mental health disorders	The highest prevalence rates were recorded for ADHD (22.1%), followed by Depression (20.8%). The study also showed a higher prevalence of mental illnesses in males than females	<u>Strengths</u> 149 charts reviewed <u>Limitations</u> Single site study. The study was a retrospective chart review
Cortina, M. A., Sodha, A., Fazel, M., & Ramchandani, P. G. (2012). Prevalence of child mental health problems in sub-Saharan Africa: A	To assess the prevalence of child mental health problems in community settings in sub-	Meta analysis of 10 studies from six countries in Sub Saharan Africa	Level I, meta-analysis	Screening measures and clinical diagnostic tools Outcome:	The result demonstrated that adolescent mental health problems are common in sub-Saharan Africa. The study showed a total	<u>Strength</u> Level 1 study, large sample size. <u>Limitations</u> High diversity among the

systematic review. <i>Archives of Pediatrics & Adolescent Medicine</i> , 166(3), 276–281. https://doi.org/10.1001/archpediatrics.2011.592	Saharan Africa including Nigeria	(Ethiopia, Nigeria, South Africa, Kenya, Uganda, and Democratic Republic of Congo, data for 9713 children, maximum age of 16 years		Prevalence of Mental health disorder	adjusted prevalence of 14.5% for general mental health disorders in children and adolescents up to age 16 years. In addition, the study listed depression, anxiety, and posttraumatic stress disorder and some of the most common disorders.	countries studied hence the problem of generalizability. Also, there is the problem of publication bias
Fakunmoju, S. B., & Bammeke, F. O. (2015). Anxiety disorders and depression among high school adolescents and youths in Nigeria: Understanding differential effects of physical abuse at home and school. <i>Journal of Adolescence</i> , 42(1), 1–10. https://doi.org/10.1016/j.adolescence.2015.03.012	To evaluate the relationship between physical abuse at home and school and the development of anxiety and depression among adolescents	A convenience sample of 502 adolescents and youths , average age of 16 years, from eight secondary schools in Southwest Nigeria,	Level VI, cross-sectional descriptive study	Perception of child maltreatment scale, Spence Children Anxiety’s Scale Revised Children’s Anxiety and Depression Scale (RCADS) questionnaires Outcome: Physical abuse, depression, and anxiety	The study showed that physical abuse by parents was associated with the development of anxiety and depression disorders in adolescents	<u>Strengths</u> Large sample size, more than one setting thereby enhancing generalizability. <u>Limitations</u> Self-administered questionnaires used, might have introduced some elements of bias
McCann, T. V., Mugavin, J.,	To identify the help-seeking	Purposive sampling, 28	Level VI, single	Focus group interview,	The findings identified mental illness stigma,	<u>Strength</u> Diverse sample

<p>Renzaho, A., & Lubman, D. I. (2016). Sub-Saharan African migrants' help-seeking barriers and facilitators for mental health and substance use problems: A qualitative study. <i>BMC Psychiatry</i>, 16, Article 275. https://doi.org/10.1186/s12888-016-0984-5</p>	<p>barriers and facilitators for anxiety, depression and alcohol and drug use problems in young Sub-Saharan migrants</p>	<p>young sub-Saharan African migrants including Nigeria</p>	<p>qualitative study</p>	<p>in-depth interviews</p> <p>Outcome: Barriers and facilitators of help seeking</p>	<p>low mental health literacy, lack of cultural competency and financial cost as barriers to help seeking.</p>	<p><u>Limitations</u> Exploratory qualitative study such findings are context bound to the participants</p>
<p>Nyundo, A., Manu, A., Regan, M., Ismail, A., Chukwu, A., Dessie, Y., Njau, T., Kaaya, S. F., & Smith Fawzi, M. C. (2020). Factors associated with depressive symptoms and suicidal ideation and behaviors amongst sub-Saharan African adolescents aged 10-19 years: Cross-sectional study. <i>Tropical Medicine & International Health</i>, 25(1), 54–69. https://doi.org/10.1111/tmi.13336</p>	<p>To assess the burden of depression, suicidal ideation, and suicidal behavior amongst adolescents at sites in six sub-Saharan African countries including Nigeria and investigate correlated risk and protective factors.</p>	<p>7,662 adolescents from eight sites in six countries in Sub Saharan Africa (Burkina Faso, Tanzania, Ethiopia, Nigeria, Ghana, and Uganda)</p>	<p>Level VI, cross-sectional descriptive study</p>	<p>Questionnaires: Kutcher Adolescent Depression Scale (KADS-6) and Global School-Based Student Health Survey</p> <p>Outcome: Depressive symptoms and suicidal ideation/behavior</p>	<p>The results showed that suicidal behavior is common among adolescents, with the greatest burden in Ibadan, Nigeria (12.4%). The 12-month prevalence of suicide attempt was 6.4% in Ibadan, Nigeria. Depression was strongly associated with suicidal ideation.</p>	<p><u>Strength</u> Large sample size.</p> <p><u>Limitations</u> High diversity among the countries studied hence the problem of generalizability. Also, the study is a cross sectional study hence causality could not be established</p>

Obimakinde, A. M., Omigbodun, O., Adejumo, O., & Adedokun, B. (2019). Parenting styles and socio-demographic dynamics associated with mental health of in-school adolescents in Ibadan, south-west Nigeria. <i>Journal of Child and Adolescent Mental Health</i> , 31(2), 109–124. https://doi.org/10.2989/17280583.2019.1662426	To evaluate the parenting styles and socio-demographic factors associated with the development of adolescents' mental health disorder.	A cross-sectional multistage study, random sampling, 286 adolescents, age 10 to 19 years, from four schools in Ibadan, Nigeria	Level VI, cross-sectional descriptive study	Self-administered questionnaires including socio-demographic questionnaire, scale of parenting styles (SPS) questionnaire, and the strengths and difficulties questionnaire (SDQ) Outcome: Parenting styles and demographic factors	The study demonstrated that adolescents that perceived the parents as authoritarian experienced peer problems, conduct problems, hyperactivity problems, emotional problems, and lacked pro-social behaviors. Also, adolescents from lower socioeconomic status experienced conduct and emotional problems as opposed to those from higher socioeconomic status.	<u>Strength</u> Large sample size. <u>Limitations</u> Interview was conducted only with adolescents. Self-administered questionnaire might have introduced some elements of bias
Oderinde, K. O., Dada, M. U., Ogun, O. C., Awunor, N. S., Kundi, B. M., Ahmed, H. K., Tsung, A. B., Tanko, S. T., & Yusuff, A. A. (2018). Prevalence and predictors of depression among adolescents in Ido Ekiti, south west Nigeria. <i>International</i>	To determine the prevalence and predictors of depression among adolescents in a rural region in Southwest Nigeria	Cross sectional descriptive survey, stratified random sampling, 540 adolescents aged 10-19 years from six secondary schools in	Level VI, cross-sectional study	Socio demographic Questionnaire, Patient Health Questionnaire-9 modified for adolescents (PHQ-A) and Kiddies-Schedule for Affective disorders and Schizophrenia (Kiddies-SADS)	The one-month prevalence of depression was 16.3%. The factors that contributed to the development of depression include maternal death, being from a polygamous family, low socioeconomic class, single parent, frequent violence, and history of sexual abuse	<u>Strength</u> Large sample size <u>Limitations</u> This study was a cross sectional; a longitudinal study would have provided more information as to cause and effect of depression

<i>Journal of Clinical Medicine</i> , 9(3), 187–202. https://doi.org/10.4236/ijcm.2018.93017		South West Nigeria.		Outcome: prevalence of depression and predicting factors		
Oduguwa, A. O., Adedokun, B., & Omigbodun, O. O. (2017). Effect of a mental health training program on Nigerian school pupils' perceptions of mental illness. <i>Child and Adolescent Psychiatry and Mental Health</i> , 11, Article 19. https://doi.org/10.1186/s13034-017-0157-4	To assess the impact of a 3-day mental health training for school pupils in Southwest Nigeria, on the knowledge of mental illness, attitude, and social distance towards persons with mental illness.	Random sampling, 205 students from five schools in Southwest Nigeria, randomly assigned to control and experimental groups	Level II, randomized control trial	5-h mental health training session spaced out over 3-days, consisting of didactic lecture sessions, group discussions, and role play. Outcome: knowledge, attitude, and social distance	The findings revealed a positive change in the knowledge and attitude of participants in the intervention group. Also, there was a steady increase in mean social distance scores from baseline to follow-up in intervention group but this change was not significant	<u>Strength</u> Large sample, level 11, randomization <u>Limitations</u> The time between post-assessment and follow-up was just 3 weeks and this period may not be sufficient for sustained change
Ogbonna, P. N., Iheanacho, P. N., Ogbonnaya, N. P., Mbadugha, C. J., Ndubuisi, I., & Chikeme, P. C. (2020). Prevalence of mental illness among adolescents (15-18 years) treated at Federal Neuropsychiatric Hospital, Enugu	To study the prevalence of mental illness among adolescents treated at Federal Neuropsychiatric Hospital, Enugu, Nigeria.	A retrospective descriptive design. 1255 adolescents, age 15–18 years diagnosed with mental illness from 2004 to 2013 at Federal Neuropsychi	Level VI, retrospective descriptive design	Review of case notes of 1255 patients aged 15 to 18 between 2004 and 2013 Outcome: prevalence of mental health disorders	The most common mental health disorder was schizophrenia, followed by neurodevelopmental disorders, bipolar and depressive disorders. Also, the study showed substantial gender difference in the prevalence of mental illnesses with	<u>Strengths</u> Large sample size, 1255 charts reviewed <u>Limitations</u> Single site study. The study was a retrospective chart review

Nigeria, from 2004 to 2013. <i>Archives of Psychiatric Nursing</i> , 34(1), 7–13. https://doi.org/10.1016/j.apnu.2019.1		atric Hospital, Enugu, Nigeria.			higher rates among male adolescents	
Umar, M. U., Obindo, J. T., & Omigbodun, O. O. (2018). Prevalence and correlates of ADHD among adolescent students in Nigeria. <i>Journal of Attention Disorders</i> , 22(2), 116–126. https://doi.org/10.1177/1087054715594456	To determine the prevalence and psychosocial correlates of ADHD among adolescents in Jos, Nigeria	A cross-sectional descriptive study, multistage random sampling, 505 adolescent students aged 11 to 19 from five schools in North-Central Nigeria.	Level VI, cross-sectional descriptive study	Administration of Kiddie–Schedule for Affective Disorders and Schizophrenia–Present and Lifetime Version (K-SADS-PL), Raven’s Standard Progressive Matrix (SPM) and the Children’s Global Assessment Score (CGAS) forms Outcome: prevalence of ADHD and psychosocial correlates	The result showed a prevalence ADHD rate of 8.8% among the adolescent population surveyed which is consistent with similar worldwide studies with prevalence rates of 6% to 13%. Also, higher prevalence of ADHD is associated with younger age, functional impairment, and use of psychoactive substances by parents	<u>Strength</u> Large sample size. Although a cross-sectional study, the study utilized structured instrument in assessing ADHD <u>Limitations</u> Interview was conducted only with adolescents. Parents report externalizing symptoms such as ADHD better than adolescents.

Appendix D

Melnyk's Level of Evidence

Level 1 - Systematic review & meta-analysis of randomized controlled trials; clinical guidelines based on systematic reviews or meta-analyses

Level 2 - One or more randomized controlled trials

Level 3 - Controlled trial (no randomization)

Level 4 - Case-control or cohort study

Level 5 - Systematic review of descriptive & qualitative studies

Level 6 - Single descriptive or qualitative study

Level 7 - Expert opinion

Melnyk, B. M., & Fineout-Overholt, E. (2015). *Evidence-based practice in nursing & healthcare: A guide to best practice* (3rd ed.). Wolters Kluwer/Lippincott Williams & Wilkins.

Appendix E

CITI Training Certificate



Completion Date 23-Jul-2022

Expiration Date 22-Jul-2025

Record ID 50290325

This is to certify that:

NJIDEKA EMENYI

Has completed the following CITI Program course:

Biomedical Research - Basic/Refresher

(Curriculum Group)

Biomedical & Health Science Researchers

(Course Learner Group)

1 - Basic Course

(Stage)

Not valid for renewal of certification
through CME.

Under requirements set by:

Liberty University**CITI**
Collaborative Institutional Training InitiativeVerify at www.citiprogram.org/verify/?w2b3481d8-d49c-4b72-b19c-452ff0510b84-50290325

Appendix F

Institutional Board Review Approval Exempt Letter

9/20/22, 9:27 PM

[External] IRB-FY22-23-277 - Initial: Non-Human Subjects Research - Emenyi, Njideka Nkemjika - Outlook

[Reply all](#) [Delete](#) [Report](#) ...**[External] IRB-FY22-23-277 - Initial: Non-Human Subjects Research**

[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

LIBERTY UNIVERSITY.

INSTITUTIONAL REVIEW BOARD

September 14, 2022

Njideka Emenyi
Cynthia GoodrichRe: IRB Application - IRB-FY22-23-277 MENTAL HEALTH DISORDERS AMONG THE ADOLESCENT
POPULATION IN NIGERIA: AN INTEGRATIVE REVIEW

Dear Njideka Emenyi and Cynthia Goodrich,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds that your study does not meet the definition of human subjects research. This means you may begin your project with the data safeguarding methods mentioned in your IRB application.

Decision: No Human Subjects Research

Explanation: Your study is not considered human subjects research because it will not involve the collection of identifiable, private information from or about living individuals (45 CFR 46.102).

Please note that this decision only applies to your current application. Any modifications to your protocol must be reported to the Liberty University IRB for verification of continued non-human subjects research status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this determination or need assistance in determining whether possible modifications to your protocol would change your application's status, please email us at irb@liberty.edu.

Sincerely,

G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

about:blank

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