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## **A Scoping Review Investigating Relationship between Perception and Screening of Adults for Depression in Primary Healthcare Centers in Nigeria**

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## Abstract

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Depression in adult's population is often under-diagnosed by healthcare professionals working in the primary healthcare or non-mental health settings in Nigeria. There is capacity problem and poor understanding of the screening process, and no clear action plan or guideline to sustain depression screening in primary healthcare settings in Nigeria. The efforts to improve depression screening services remains suboptimal, and the barriers continue to be poorly understood partly due to the perception of the primary healthcare workers. This study is a scoping review aimed at identifying the gap in literature on primary healthcare workers' perception and adults' depression screening. The methodology used followed the scoping review framework developed by Arksey and O'Malley. Four databases (CINAHL, PubMed, EBSCO, Psycinfo) were searched with related terms. A total of 453 articles were retrieved and screened. The 74 articles that met inclusion criteria were selected for full text review and data extraction after duplicate removal. Studies published in 2017 or earlier, or as a case reports, and those not published in English were excluded. Data were extracted using criteria (study objective, setting/design, gap addressed, and main findings). The results revealed that a total of 24 articles were included, and (5/24, 21%) analyzed on perception, tools for depression in adults (8/24, 33%). Depression screening intervention with apps, Smartphone, and algorithm (6/24, 25%); and screening intervention with depression standardized scales (5/24, 21%). In conclusion, the future research needs to address the knowledge gap on relationship between primary healthcare workers perception and depression screening in Nigeria.

**Keywords:** Depression screening, perception, primary healthcare workers, Nigeria

## INTRODUCTION

Depression is a significant public health issue worldwide, contributing to substantial morbidity, disability, and economic burden (World Health Organization [WHO], 2022). In Nigeria, the prevalence of depression is estimated at 25% with many adults suffering in silence due to various barriers to effective screening (Atilola et al., 2022). Primary healthcare workers being the first point of contact are to play a crucial role in the early identification and management of depression. Conversely, there is a capacity gap in the effective screening and identification of depression within primary healthcare settings in Nigeria (Ebigbo et al., 2023).

One of the critical factors influencing this gap is the perception of the primary healthcare workers. Also, misconceptions about mental health significantly hinder the willingness of individuals to seek help and the ability of primary healthcare workers to recognize and screen for depression (Okpalauwaekwe et al., 2022). The situation is confounded with limited training and

the resources available to primary healthcare workers further exacerbate the issue, leading to under diagnosis and inadequate management of depression (Onyeaka et al., 2022).

Globally, depression is present in 10% to 20% of adults' patients attending primary health care (Siniscalchi et al., 2020). According to the WHO (2023), 5% of the adults' population, estimated at 450 million people, suffers mood or depression disorder worldwide at least once in their life. In Africa, 29.2 million suffers from depression disorder, with 3.9% affected in Nigeria (Adewuya et al., 2021). The burden of depression is particularly pronounced in Nigeria, yet the screening of adults for this condition in the primary healthcare settings remain inadequate (Adeloye et al., 2023). Addressing the attitude and perceptual barriers issue is crucial, given the essential role of primary healthcare workers in providing accessible and comprehensive health services, including mental health care (WHO, 2023).

Recent studies indicate that perceptions of depression among both healthcare providers and patients significantly influence the effectiveness of screening and management practices (Olumide et al., 2023). Misconceptions, stigma, and cultural beliefs about mental health can lead to reluctance in seeking care and in primary healthcare workers' ability to identify and manage depression effectively (Akinola et al., 2023). These perceptual problem contribute to the under diagnosis and under treatment of depression, exacerbating the public health burden.

Understanding the relationship between perception and the screening of adults for depression in primary healthcare settings is imperative for developing targeted interventions. Such interventions can enhance awareness, reduce stigma, and improve the capacity of primary healthcare workers to screen for depression (Ezeokoli & Ugwueze, 2024). A scoping review is an appropriate methodological approach to comprehensively map the existing literature, identify knowledge gaps, and provide a foundation for future research and policy development (Arksey &

O'Malley, 2005; Levac et al., 2010). This study contributes to knowledge and support the development of effective strategies to improve on adults' depression screening in primary healthcare settings in Nigeria. By addressing the perception and enhancing the capacity of primary healthcare workers, this research aims to improve health outcomes on depression and well-being of Nigerian population.

The objective of this scoping review is to examine the relationship between perception and the screening of adults for depression in primary healthcare settings in Nigeria. By systematically examining existing literature, this study seeks to identify and highlight the potential areas for intervention. The specific objectives are to: (1) identify existing literature that examines potential directional relationship between primary healthcare workers perception and adults' depression screening, (2) identify gaps in the existing literature and areas that require future research.

## **METHODOLOGY**

### **Study Design**

This study makes use of the Arksey and O'Malley (2005) framework developed for scoping review and adopted Levac et al. (2010) and Peters et al. (2015) suggestions when possible. The rationale for choosing this scoping review framework is that it was the most appropriate method of assessing the literature to identify gaps and opportunities for future research. In conducting this scoping review, 6 steps were followed: (1) identifying the research questions, (2) identifying relevant studies, (3) selection of studies, (4) charting the extracted data, (5) collating, analyzing, summarizing, and reporting the results, and (6) consultation. This study was carried out between October 2023 and March, 2024. Data were extracted using criteria like (study objective, setting/design, gap addressed, and main findings).

## Step 1: Identifying Research Questions

The Population-Concept-Context (PCC) framework was used in identifying the main concepts of this scoping review questions; it directed the search strategy and made mapping out of the literature review for the study simple (Arksey & O'Malley, 2005; Levac et al., 2010; Peters et al., 2015) as shown in Table 1. The research questions identified were:

1. How have primary healthcare workers perception, attitude and barriers been characterized and measured in the literature in relation to depression screening in adults attending primary healthcare level? This is to explore how perception and its components are used in this evaluative body of literature.
2. A sub-question “what gaps exist in the evaluation of the relationship between perception and depression screening in the primary healthcare level? to map a collection of relevant literature around this relationship and inform the direction of future research.

Table 1.

### *Mapping out of Studies Reviewed with PCC Framework to Identify Concepts*

PCC Elements	Characterization
Population	Individuals concerned with depression screening (primary healthcare workers).
Concepts	Perception of primary healthcare workers, including cognitive and structural components. Depression screening, attitude and barriers encountered by primary healthcare workers, screening guidelines, and outcome.
Context	Studies published within 6 years (2018 and 2023) and published in English language except scoping framework articles.

## Step 2: Identifying Relevant Studies

### Databases and Search Terms

The process of identifying relevant studies for this scoping review involved searching four (4) databases: CINAHL, PubMed, EBSCO, PsycInfo. The terms related to “depression disorder”, “depression screening”, “depression screening guideline”, “primary healthcare workers perception”, “primary healthcare workers attitude”, “barriers to depression screening”, and “depression screening at primary healthcare level” were searched. Each of the databases was searched using study title, abstract, keywords, and subject heading as shown in Table 2. The search string strategies were reviewed by a librarian who is an expert in systematic and scoping review for the purpose of filtering the results and managing citations. All the authors contributed and the final search was conducted on 21<sup>st</sup> of January, 2024.

Table 2.

*Databases, Terms Used, and Search Strategies Applied*

Variables searched	Databases Searched			
	EBSCO	CINAHL	PubMed	PsycInfo
Depression screening	(Depression disorder [Title/Abstract] OR Depression screening OR adults depression disorder [Title/Abstract]) AND	(Depression screening [Title/Abstract] OR Depression screening OR adults depression disorder [Title/Abstract]) AND	(Depression screening[Title/Abstract] OR Depression screening [Mesh] OR adults depression disorder [Title/Abstract]) AND	(DE (Depression disorder[Title/Abstract] OR Depression screening OR adults depression disorder [Title/Abstract])) AND
Screening guideline	“Depression screening guideline for primary healthcare” OR “adults depression screening guideline” [Title/Abstract] OR	“Depression screening guideline for primary healthcare” OR “adults depression screening guideline” [Title/Abstract] OR	“Depression screening guideline for primary healthcare” [Mesh] OR “adults depression screening guideline” [Title/Abstract] OR	(DE (“Depression screening guideline for primary healthcare” OR “adults depression screening guideline” [Title/Abstract])) OR
Perception	“Perception on depression screening” OR “PHC workers perception depression screening” OR	Perception on depression screening” OR “PHC workers perception depression screening” OR	Perception on depression screening”[Mesh] OR “PHC workers perception depression screening”[Mesh] OR	(DE (“Perception on depression screening” OR “PHC workers perception depression screening”)) OR
Attitude	“PHC workers attitude towards depression screening” OR	“PHC workers attitude towards depression screening” OR	“PHC workers attitude to depression screening”[Mesh] OR	(DE (“PHC workers attitude to depression screening”)) OR
Barriers	“Barriers to depression screening”	“Barriers to depression screening”	“Barriers to depression screening”[Mesh]	(DE (“Barriers to depression screening”))
Limitations	Human subject English language 2019-2023 publication year	Human subject English language 2019-2023 publication year	English language 2019-2023 publication year	English language 2019-2023 publication year

### **Step 3: Selection of Studies**

**Articles Selection Procedure:** Two stages were followed during screening of studies for identifying and selection of articles. In the first step, first author acted as a primary coder, removed duplicates and screened articles based on title and abstract. The second reviewer conducted hand search on initial screening decisions meticulously to review the articles. The two screeners met and resolved discrepancies through discussion and consensus. In the next step, primary coder screened articles again based on full text reading, while the secondary coder painstakingly reviewed all excluded articles to ascertain accuracy of selection judgments.

**Inclusion Criteria:** The studies included were those that met the following criteria: (1) defined study population as adults; (2) defined depression screening and perception as an outcome; (3) described a study related to screening tools either uses of app, algorithm, Smartphone or different depression screening scales; (4) articles with full text written in English; (5) articles published in peer-reviewed journals; (6) original research either qualitative or quantitative were included; (7) articles that measures depression screening either as dependent, independent, mediator and or as moderator variable; (8) articles published between January 2018 and December 2023 except those articles on scoping review framework.

**Exclusion Criteria:** Studies were excluded if they met the following criteria: (1) published in 2017 or earlier; (2) published in French, Spanish, or any other language which is not English due to difficulty in translation of the findings.

### **Step 4: Charting the Extracted Data**

Data were extracted from the full text of the articles included and entered into Microsoft Excel to chart the information. Gap in literature that informs future research on depression screening and perception is shown in Table 3.



Table 3.

*Literature Matrix on Relationship between Perception and Depression Screening*

Author & Year	Study Objective	Study Setting & Design	Gap Addressed	Study Findings
Hsieh et al. 2021	Identified how adults women from diverse background perceive the quality of perinatal depression screening	Public health clinic in Champaign county, USA  Qualitative	Perception of women in perinatal period on quality of mandated depression screening particularly among diverse populations is not well understood.	Majority of the participants perceived that screening did not lead to providers' support, even when patients' voiced concerns or when the screening results indicated clinically significant postpartum depression symptoms.
Lebrum et al. 2022	Examined the groups' ability to discriminate between severity of depression levels, together with their reactions and personal attitudes towards people presenting such symptomatology	Sport academy, performing art academy and selected education center in UK  Quantitative (Vignette method)	Knowledge about stigma and reactions towards symptoms of depression and personal attitudes towards depression.	Differences in knowledge, reactions, and attitudes towards symptoms of depression identified in relation to performance environments.
Pilipenko et al. 2023	Investigated screening-related practice and belief	Primary care clinic Columbia, USA  Mixed-methods	Patient screening practice on case-by-case or deferred based on perception of clinical relevance and time constraint.	Participants endorsed multiple screening-related practices in compliance with universal depression screening.
Pilipenko et al. 2021	Examined depression	Primary care clinic Columbia,	Patient knowledge and	Improved understanding of

	screening experience and belief, and perception of screening related importance among primary care patients.	USA  Quantitative design	priorities about screening for depression	patients' screening-related perception and experience is critical to ensuring delivery of quality care.
Rodríguez-Eguizabal et al. 2023	Deepen understanding towards primary health care response capacity by specifically using patients with or without mental disorder.	Primary Health Care Centre, Zaragoza, Spain  Qualitative	Address patient perception of the primary health care response capacity (PHCRC).	Patient experience was both negative and positive in the use of primary care services to access mental health care.

## RESULTS

### Step 5: Collating, Analyzing, Summarizing, and Reporting the Results

Four databases searched yielded  $N=453$  after collation of the articles. A total of  $n=201$  articles were identified as duplicates and removed. On the basis of title and abstract,  $n=178$  articles were excluded then yielding  $n=74$  unique relevant articles. After this stage, then  $n=74$  articles were screened and reviewed by full text,  $n=50$  articles were excluded ( $n=13$  wrong population;  $n=10$  intervention not targeting depression screening;  $n=11$  not peer reviewed;  $n=9$  not in English;  $n=7$  review articles). Thus, among the  $n=74$  articles screened,  $n=24$  were identified for inclusion in the scoping review as shown in the PRISMA flow chart in Figure 1.

The results revealed that a total of 24 articles were included, and (5/24, 21%) analyzed on perception, tools for depression in adults (8/24, 33%). Depression screening intervention with apps, Smartphone, and algorithm (6/24, 25%); and screening intervention with depression standardized scales (5/24, 21%).

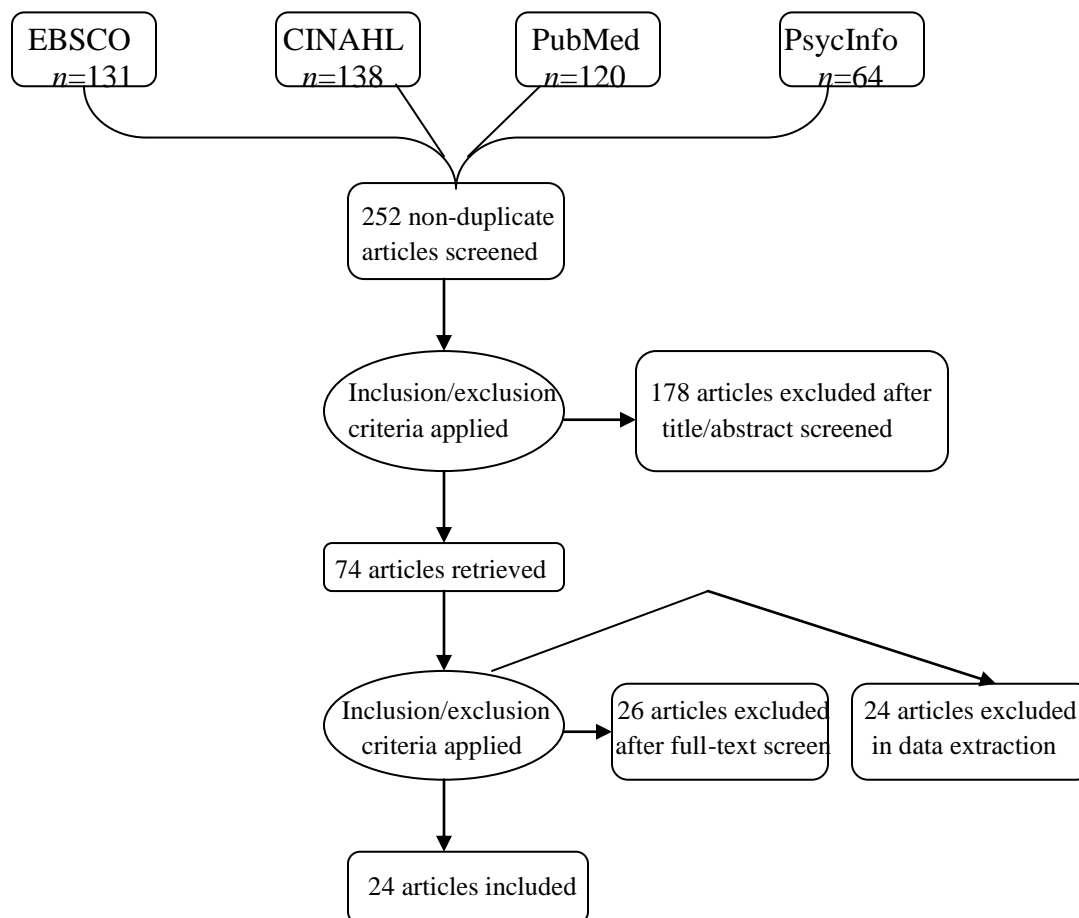


Figure 1: PRISMA flow chart of the articles selected for scoping review

## DISCUSSION

### Step 6: Consultation

#### Perception and Depression Screening

This scoping review explored the relationship between perception and depression screening. Articles from various authors with diverse backgrounds were decisively examined to detect the gaps in literature to inform direction for future research. Results revealed that depression screening has a distinct relationship with perception and is influenced by attitude and barriers (Olumide et al., 2023; Pilipenko et al. 2021). Majority of studies that examined

depression screening focused on patients' perception with largely mixed findings, and there was no relationship between depression screening and patients follow up (Hsieh et al. 2021; Pilipenko et al. 2021).

Primary healthcare workers should not only consider depression screening in clients with terminal illness alone but rather, should pay close attention to adults who might be at risk (Rodríguez-Eguizabal et al. 2023). There is a need for depression screening guidelines in primary healthcare due to possibility of non-linear relationship with perception which explains previous mixed findings. Higher percentage of the articles studied showed that depression screening is associated with a higher likelihood of primary healthcare workers' perception (Olumide et al., 2023; Rodríguez-Eguizabal et al., 2023).

### **Current Gaps and Future Research Directions**

A number of gaps exist in literature on perception about routine depression screening based on the results of this current scoping review. Firstly, more clarity on the relation that exists between depression screening and perception of primary healthcare workers is a gap to evaluate directional sequential changes. Pilipenko et al. (2021) found that improved understanding of patients' screening-related perception and experience is critical to ensuring delivery of quality care. Secondly, measures of variables to examine perception in depression screening-related research should be expanded. Majority of the studies examined used categorical measures which do not allow full understanding. For instance, Rodríguez-Eguizabal et al. (2023) reported that patient experience was both negative and positive in the use of primary care services to access mental healthcare. Future research should consider using measures of dichotomous categorization of variables to evaluate perception in relation to depression screening.

Significantly, future research should examine perception and attitude in relation to depression screening with focus exclusively on primary healthcare workers.

### **Strength and Limitations**

This scoping review strength lies in the rigorous review approach employed and ability of the reviewers to search and capture recently published articles. First limitation is that the review focused on studies that included depression screening and perception, attitude and perceived barriers by primary healthcare workers while studies on depression treatment were excluded, although those studies can provide insight into continuum care of depression. Secondly, studies reviewed were limited to primary healthcare research and not across the three tiers of healthcare.

### **Implications of the Scoping Review on Primary Healthcare in Nigeria**

The findings of this scoping review have several implications for primary healthcare services in Nigeria. Firstly, there is a need for implementation of National Mental Health Act 2021 that addresses the unique routine clinical assessment of adults for depression in the context of primary healthcare (Kareem et al., 2023). There is need to close the gap on depression screening as majority of the primary healthcare workers often lack the basic skills and knowledge to recognize the symptoms of depression, leading to missed opportunities for early intervention (Adeloye et al., 2023). Policies should include provisions of regular training and retraining on depression screening and for capacity-building programs for primary healthcare workers (WHO, 2023). Secondly, public health campaigns should aimed at reducing the stigma and raising awareness about the need for depression screening to change primary healthcare workers attitudes and encourage individuals to screen (Onyeaka et al., 2023).

## CONCLUSION

The primary healthcare systems lack capacity to fulfill the World Health Organization universal depression screening and this is due in part to perception, attitude and perceived barriers. Consequently, this scoping review informed decisions to examine primary healthcare workers perception, develop and implement Primary Health Care–Depression Screening Guideline (PHC-DSG) to address the identified problem. The review fill the gap in knowledge as stakeholders now understand the current state of depression screening in primary healthcare settings.

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