Prevalence and moderators of depression symptoms among black individuals in Western Countries: a systematic review and meta-analysis among 1.3 million people in 421 studies

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Summary

Background Black people living in Western countries face a range of structural challenges and disparities (e.g. difficult socio-economic conditions, historical and intergenerational trauma, police brutality, racism) that adversely affect their mental health. This study assesses depression prevalence among Black individuals in minority contexts, examining sociodemographic factors, study type, evaluation period, publication year, and measures; and differences in depression rates between Black individuals and other racial groups (Asian, Indigenous, Latinx, White).

Methods To identify studies, a comprehensive search strategy was developed and executed on September 30, 2022 across six databases (Allied and Complementary Medicine Database, APA PsycInfo, CINAHL. Cochrane CENTRAL, Embase, MEDLINE). The meta-analysis protocol was registered with PROSPERO (CRD42020155634). A random-effects meta-analysis estimated depression prevalence among Black individuals. Meta-regression tested differences by racial background, gender, sample type, evaluation method, age group, and publication year, reporting Odd ratios (ORs) with Confidence intervals (CIs).

Findings From 21,215 citations, 421 studies were included with a sample of 1,305,366 Black individuals (411 studies were conducted in North America, 9 in Europe, and one in both Europe and North America). Pooled prevalence was 20.2% (95% CI: 18.7%–21.7%) among Black individuals, 13.4% (95% CI: 10.2–16.9) among Asians, 21.0% (95% CI: 18.7–23.5) among Latinx, and 17.8% (95% CI: 16.3–19.2) among Whites. It was significantly lower among White (OR = 0.98, p = 0.04, 95% CI: 0.95, 1.00) and Asian people (OR = 0.94, p = 0.004, 95% CI: 0.90, 0.98) compared to Black individuals. Pooled prevalence was 26.6% for the past week (95% CI: 24.6%–28.6%), 22.1% (95% CI: 19.2–23.1) for the past two weeks, 21.6% (95% CI: 11.6–33.5) for the past month, 9.1% (95% CI: 7.7%–10.7%) for the past year, and 16.6 (95% CI: 12.9–20.8) for lifetime. Depression prevalence was higher among Black women (24.3%; 95% CI: 21.3–27.4) and in North America (20.3%; 95% CI: 18.8–21.9). Depression prevalence was higher in 2000–2009 (23.5%; 95% CI: 20.9–26.2), decreased in 2010–2019 (17.7%; 95% CI: 15.6–19.9) and increased since 2020 (20.6%; 95% CI: 17.5–23.8).

Interpretation As depression constitutes a burden among Black individuals in the West, it is urgent to mobilize public health agencies, research funding agencies and clinicians to develop and implement antiracist and culturally adapted prevention and intervention programs.

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Research in context

Evidence before this study

There is strong evidence that in Western countries, where Black individuals are a minority, they are more likely to experience inadequate social conditions and significant disparities, which can contribute to the development of depressive disorder symptoms. By contrast, there is no synthesis of the prevalence and risk factors associated with depressive disorder among Black individuals in the West. Before conducting this research, we searched published systematic reviews and meta-analyses in six electronic databases: Allied and Complementary Medicine Database (Ovid), APA PsycInfo (Ovid), CINAHL (EBSCOhost), Cochrane CENTRAL (Ovid), Embase (Ovid) and MEDLINE (Ovid). We searched with the terms ((exp mood disorders/(depression or depressive or dysthymi*) OR ((affective or mood) adj2 disorder*)) AND (black* OR "african american*" or (african* adj2*) OR afro* or negro*)). Our search included all Western countries and had no date or language restrictions. No relevant paper was found. In fact, no systematic review has been conducted on the prevalence rate of depressive disorder among Black people in the West, either at the level of a country, a continent or in the West generally.

Added value of this study

From 21,215 citations, 421 studies with a sample of 1,305,366 Black individuals were included in the meta-analysis. 411 studies were conducted in North America, 9 in Europe and one in both Europe and North America. The pooled prevalence was 20.2% (95% CI: 18.7%–21.7%) among Black individuals. The odds of presenting depression were 2% and 6% lower among White and Asian people compared to Black people, respectively. The prevalence of depression was higher among Black women (24.3%) compared to Black men (18.5%). The pooled prevalence of depression in Black individuals was significantly different regarding type of sample, region, age, evaluation period, measure, and publication year.

Implications of all the available evidence

There is a burden of depression among Black individuals in Western countries, with notable disparities compared to Asian and White people. The higher prevalence of depression among Black women compared to Black men underscores the intersectionality of race and gender as a critical factor in mental health disparities. Findings also indicated that there was an increase in depression prevalence after 2020, reflecting potential impacts of recent global stressors, including the COVID-19 pandemic and protests following the murder of George Floyd. These findings underscore the urgent need for targeted mental health interventions and culturally sensitive diagnostic tools, calling for an antiracist approach that addresses racial and gender disparities. More importantly, these results advocate for the development and implementation of policies to mitigate structural inequalities that continue to negatively impact Black child, adolescents, adults, families, and communities.

Introduction

Depression is one of the most common mental health disorders, with a prevalence of 3.8%, representing around 280 million people worldwide.[1] It affects all segments of the world's population, but is even more prevalent among certain groups, including women, older adults, those with adverse childhood experiences, and survivors of natural disasters.[2–6] Depression has major consequences for the physical functioning (e.g. headaches, cramps, constipation, stomach aches), psychological impairment (e.g. feeling tired or low energy, poor memory, attention problems), emotional regulation (e.g. irritability, sadness, anger), financial and social wellbeing (e.g. ability to work, ability to maintain friendships, marital difficulties, impact on family life, difficulty taking on social responsibilities, including parenthood) of those affected.[7–12] Moreover, depression has major long-term impacts (diabetes, high cholesterol, high blood pressure, stroke, heart attack) and increases the risk of exposure to dangerous situations, suicidal ideation and suicide attempts.[12–16]

In addition to genetic and physiological risk factors (e.g. family history of depression, variations in genes affecting neurotransmitters, hormonal imbalances, chronic illnesses, brain structure abnormalities),[17,18] living conditions are a major factor in depressive disorders.[19–21] Poverty, exposure to family and community violence, multiple adverse childhood experiences and social and economic disparities all increase the risk of depression in people exposed to the disorders.[6,19,20,22] Black individuals living in a minority context in Western countries are more likely to have poor social conditions, unfavourable economic situations and major disparities that may lead to the development of symptoms of a depressive disorder.[23–28] The term "Black individuals living in a minority context in Western countries" refers to people of African descent with Black skin residing in societies where they represent a smaller

demographic group, often within predominantly White or non-Black populations. In North America and Europe, these people face structural factors such as inadequate housing, residential segregation based on social class and race, food insecurity, unemployment, underemployment, job insecurity, poverty, income inequality, poor access to health care, social exclusion, early adversities, intergenerational trauma, racial segregation, and difficult immigration experiences.[29–36]

In addition to these difficult social conditions, many Black people experience racial discrimination and are exposed to various barriers linked to the experience of interpersonal, institutional and systemic racism in different spheres of Western society (e.g. health, education, housing, hiring process, racial profiling).[37–42] Studies conducted in recent years have shown that these experiences are associated with a higher prevalence of depressive disorder symptoms in victims compared with non-victims.[26,43–46] However, despite this evidence, there has been no systematic review to examine the prevalence of depression among Black people living in minority situations worldwide. None compare depression among Black individuals to other racial groups. In addition, to date, few cross-study moderation analyses have been conducted to examine whether the prevalence of depression differs in Black people according to gender, socio-demographic conditions, region of residence, and between Black communities and other racial groups. At a time when there is increasing debate about depression in Black minority communities, after it has long been stigmatised, it is time to synthesise the global literature to inform clinical practice, decision-making in public health and research funding.

The present systematic review and meta-analysis aims to: 1) examine the prevalence and distribution of depression across samples of Black individuals living in a minority context in Western countries; 2) analyze differences in the distribution according to gender, age, geographical region, study type, evaluation period, year of publication, type of assessment and measures used; 3) investigate differences between Black people and other racial groups (Asian, Indigenous, Latinx, and White) in depression prevalence rates.

Methods

Protocol registration

The detailed meta-analysis protocol was registered with PROSPERO (Number: CRD42020155634). No adaptation was necessary in the initial protocol during the process.

Search strategy

This review focuses on identifying studies that look at the prevalence of depressive symptoms among Black communities. A research librarian with experience in planning various knowledge synthesis projects drafted, developed, and implemented a search strategy to find pertinent published articles in six electronic databases: Allied and Complementary Medicine Database (Ovid), APA PsycInfo (Ovid), CINAHL (EBSCOhost), Cochrane CENTRAL (Ovid), Embase (Ovid) and MEDLINE (Ovid). The strategy was informed, in part, by others used in previous Cochrane systematic reviews on depression[47–49] as well as in other reviews on Black communities.[50–52] A draft search strategy was designed by the research librarian for APA PsycInfo (Ovid) using a combination of pertinent subject headings along with relevant keywords. This initial strategy was peer-reviewed by another research librarian who used the Peer-Review of Electronic Search Strategy guidelines 53 to evaluate the strategy's effectiveness and thoroughness. The final strategy was executed on September 30, 2022. The complete search strategy is available in Supplementary methods 1. For some databases, results were limited by publication type to identify only those references from academic journals (details are provided in the full search strategy). Once searches were completed, results were exported from databases and then imported into Covidence™, an online tool used to manage various steps of a review's screening phases. Duplicate references were identified and removed once imported into Covidence. Additional duplicates were identified and excluded while screening references. The reference lists of included studies were checked to identify additional studies missing from the initial electronic search in the different datasets.

Steps for selection

A total of 42,475 studies were identified and imported into Covidence™ for initial screening and 21,260 duplicates were removed. Thirteen authors completed the title and abstract screening of 21,215 articles, resulting in the exclusion of 15,850 articles. A total of 5365 full-text articles underwent eligibility assessment, and 4944 were excluded for various reasons: 766 did not report data on Black individuals, 3741 did not report the prevalence of depression in Black communities, 169 were research abstracts only, 79 did not have full text available, and 190 had the wrong study design. Each step of the process was carried out by pairs of authors with any conflicts resolved by three authors (JMC, LG, and SMMMF). A total of 421 articles were retained for data extraction and inclusion in the present study. More information is presented in the PRISMA flow diagram (Fig. 1).

Selection criteria

Articles that met the following inclusion criteria were included in the review: 1) conducted in a country where Black individuals are a minority; 2) assessing the prevalence rate of depression among Black individuals; 3) quantitative or mixed empirical studies; 4) conducted on

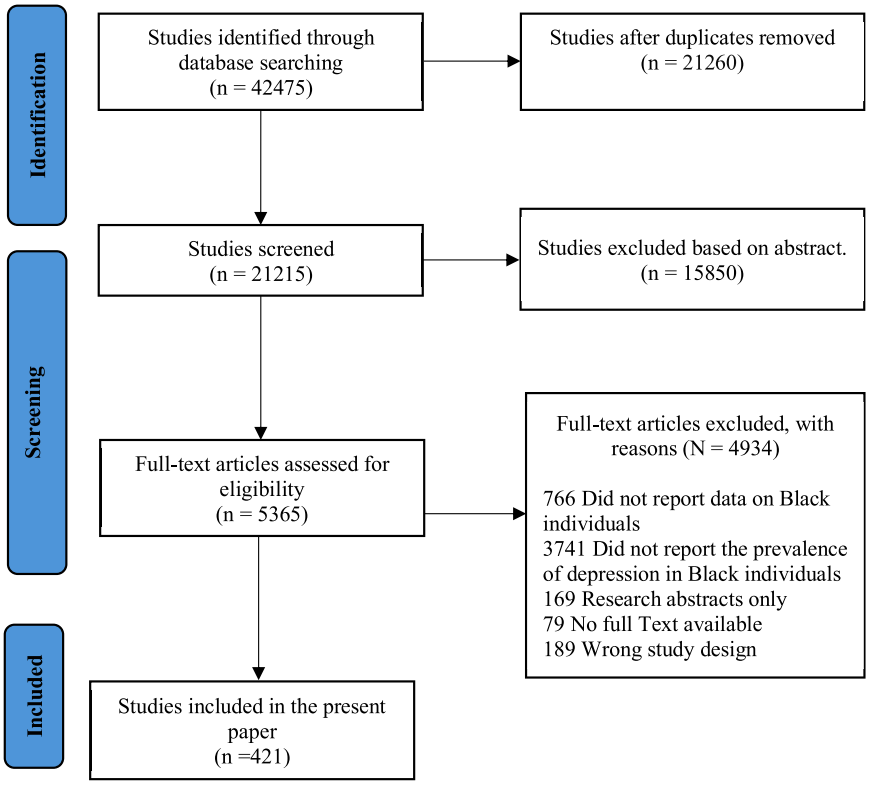

Fig. 1: PRISMA flowchart of the Included studies on the prevalence of depression in Black individuals.

a human sample. There was no restriction related to date or language. Papers that did not meet these criteria were excluded from the review.

Quality assessment

The methodological quality of quantitative studies was assessed using the JBI Critical Appraisal Checklists for Qualitative and Cross-sectional Research, which evaluates potential bias, conduct, and analysis.[53,54] Each criterion was evaluated using the following 9 questions: (1) Was the sample frame appropriate to address the target population?; (2) Were study participants recruited appropriately?; (3) Was the sample size adequate?; (4) Were the study subjects and setting described in detail?; (5) Was data analysis conducted with sufficient coverage of the identified sample?; (6) Were valid methods used for the identification of the condition?; (7) Was the condition measured in a standard, reliable way for all participants?; (8) Was there appropriate statistical analysis?; (9) Was the response rate adequate, and if not, was the low response rate managed appropriately? Each criterion met attributed one point to the study, which needed a minimum of 5 points to be included. The quality assessment was initially conducted independently by a pair of authors. All conflicts were resolved by a third author (LG, JMC, and SMMMF). The outcomes of the quality assessment are delineated in Supplementary methods 2.

Data extraction

The authors used Microsoft Office Excel to extract data from the 421 included studies (see Supplementary methods 2). Groups of two authors worked independently to extract data and then compared their findings for accuracy and consistency. The gathered information was organized and displayed in a table format. This data included author names, publication years, titles, sample demographics (age, gender, ethnicity), methodology details (study design, measures), evaluation timeframe (lifetime or last year), population type (community or general), as well as risk and protective factors. Additional details can be found in Table S1. When two or more articles reported results from the same dataset, the most recent is considered to avoid duplicates.

Role of the funding source

The funders were not involved in the design, data collection and interpretation and writing the paper.

Statistical analysis

The prevalence of depression was calculated using "*metaprop*" command in STATA/SE 18. A random-

effects meta-analysis was performed to estimate the pooled prevalence of depression among Black individuals. The prevalence proportions were transformed using the Freeman-Tukey double arcsine transformation to stabilize the variance.[54] This method is particularly effective when dealing with proportions that are bound between 0 and 1, as it helps mitigate the effect of extreme values and allows for more reliable statistical analysis.[54] The statistical heterogeneity was tested using I^2 statistics. The I^2 values of 25%, 50%, and 75% are considered low, moderate, and high heterogeneity across studies, respectively.[55] Publication bias was visually presented using funnel plots. Moreover, the Egger test was used to assess publication bias across the studies. A set of sub-group analyses and meta-regressions were performed to discover heterogeneity between studies. Groups included evaluation period (past week, past 2 weeks, past month, more than 1 month, lifetime, mixed, and unclear), measure (questionnaire, interview, and medical record), gender (men and women), type of sample (community and population), age group (under 18, above 18, 65 years and older, and all ages), year of publication (below 2000, 2000–2009, 2010–2019, and 2020–2024), study type (cross-sectional, longitudinal, and cohort), region (North America and Europe), quality assessment (below −1 standard deviation (SD), between −1SD and +1SD, and above +1SD), and sample size (within −2 to +2SD and above +2SD). To calculate the standard deviation of quality assessment and sample size, the quality scores and sample sizes were transformed to *z*-scores and were categorized as mentioned above. A sub-group analysis was also conducted to compare the prevalence of depression between racial-ethnic groups. Meta-regression analyses were performed to compare the prevalence proportions with a reference group. Odd ratios (ORs) with 95% confidence intervals (CIs) were reported for meta-regression analyses. The reference category for the evaluation period was within the past week, for the measure it was a questionnaire, for gender it was men, for the age group it was studies with a sample of below 18 years old, for the year of publication it was below 2000, for study type it was cross-sectional studies, for the region it was North America, for quality assessment it was below −1SD, for sample size it was within −2 to +2SD, and for the racial-ethnic group it was Black people.

Results

In total, 421 studies with a sample of 1,305,366 Black individuals were included in the meta-analysis. Among these studies, 411 studies were conducted in North America (408 in the United States, 2 in Canada and one in both Canada and US), 9 studies were conducted in Europe (seven in UK and two in the Netherlands), and one study included a sample from both North America and Europe (USA and UK). Among these studies, 246 studies (N = 4,158,881) reported the prevalence of depressive disorder among White people, 53 studies (N = 248,970) reported it among Asian people, 128 studies (N = 1,032,971) reported it among Latinx, and 61 studies (N = 485,997) reported the prevalence among people with other racial-ethnic identity. Totally, 58 studies had a sample of people aged under 18 years old, 304 had a sample of people aged above 18 years old, 46 studies specified a sample of people aged 65 years and older, and 13 studies indicated they had a sample of people with all age groups. Twenty-four included studies were published before year 2000, 120 studies were published between 2000 and 2009, 187 studies were published between 2010 and 2019, and 90 studies were published between 2020 and 2024. Most studies had community-based samples (62%) and 38% had population-based samples. The mean quality assessment was 6.70 (SD = 1.37; Min = 5; Max = 9). Study characteristics are presented in Table S1. A funnel plot of the publication bias is presented in Fig. 2. The Egger's test showed a significant result, indicating the presence of publication bias ($z = 7.74$, $p < 0.0001$). The pooled prevalence of depression among Black individuals was 20.2% (95% CI, 18.7%–21.7%; Table 1; Fig. 3). A high heterogeneity among studies ($I^2 = 99.78$) was observed. Significant differences between evaluation periods were found ($p < 0.0001$; Table 2). The highest prevalence rate was for the "past week" evaluation period (26.6% [95% CI, 24.6%–28.6%]) and the lowest rate was for the evaluation period of more than three months (9.1% [95% CI, 7.7%–10.7%]). The prevalence rate for evaluation periods within the past two weeks, past month, and lifetime was 22.1%, 21.6%, and 16.6%, respectively.

Results also showed that there were significant differences in the prevalence rates between the types of measures ($p < 0.0001$; Table 1). The prevalence of depression among studies that used questionnaires, interviews, and medical record was 23.8% (95% CI, 22.3%–25.3%), 12.0% (95% CI, 10.1%–14.0%), and 12.1% (95% CI, 8.9%–15.8%), respectively. The prevalence rates were also compared between questionnaires. A significant sub-group difference was observed ($p < 0.0001$). The prevalence of depression was 28.2% (95% CI, 26.0%–30.4%) for studies that used CESD, 27.5% (95% CI, 22.7%–32.5) for studies that used BDI, 23.1% (95% CI, 7.2%–44.2%) for studies that used Children Depression Inventory (CDI), 20.0% (95% CI, 11.6%–30.0%) for studies that used Geriatric Depression Scale (GDS), 20.1% (95% CI, 18.1%–22.2%) for studies that used Patient Health Questionnaire (PHQ), and 15.6% (95% CI, 13.5%–17.9%) for studies that used other measures.

As shown in Table 1, the prevalence of depression was higher among women (24.3% [95% CI, 21.3%–27.4%]) compared to men (18.5% [95% CI, 15.3%–

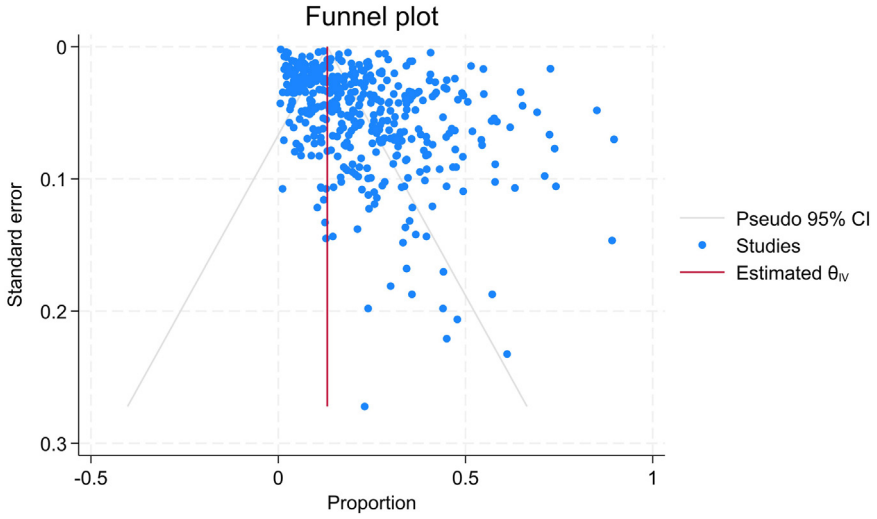

Fig. 2: Funnel plot of the publication bias between studies (421 studies).

21.9%]). Results also showed significant differences between age groups ($p = 0.01$). The prevalence rate was 21.1% (95% CI, 19.6%–22.7%) among the samples aged above 18 years old, 18.3% (95% CI, 14.4%–22.7%) among the samples aged under 18 years old, 16.5% (95% CI, 13.7%–19.5%) among the samples aged 65 years and older, and 16.5% (95% CI, 9.5%–24.8%) among the samples with all age groups. The prevalence of depression was higher among community-based samples (23.4% [95% CI, 21.7%–25.1%]) general population-based samples (15.4% [95% CI, 13.3%–17.8%]). The prevalence of depression was also higher among studies that were conducted in North America (20.3% [95% CI, 18.8%–21.9%]) compared to the studies that were conducted in Europe (13.8% [95% CI, 10.1%–17.8%]). Furthermore, sub-group analyses showed significant differences in year of publication (Table 1). No significant differences were observed regarding study types, sample size, and quality assessment. Regarding the racial-ethnic groups, a significant difference in the prevalence of depression was observed ($p = 0.002$). As shown in Table 1, the prevalence of depression in Asian, Latinx, White, and people with other racial identity was 13.4%, 21.0%, 17.8%, and 18.1%, respectively.

Meta-regression results are presented in Table 2. Regarding the racial-ethnic differences, ORs between Black and White, Black and Asian, Black and Latinx, and Black and other racial-ethnic group were computed. As shown in Table 2, the odds of presenting depression were 2% lower among White people compared to Black people (OR = 0.98, $p = 0.04$). As well, the odds of presenting depression were 6% lower in Asian people compared to Black people (OR = 0.94, $p = 0.004$). No differences in the effect size between Black people and other racial-ethnic group and Latinx were found. Results showed that the odds of presenting depression were 5% lower among studies that used past 2-week evaluation compared to studies that used past week evaluation (OR = 0.95, $p = 0.02$). There was a significant difference between studies that used more than one month (OR = 0.84, $p < 0.0001$), lifetime (OR = 0.91, $p = 0.0002$), and studies with unclear description of the evaluation period (OR = 0.86, $p < 0.0001$) compared to those that used the past week evaluation. It was also evident that the odds of presenting depression were 11% lower among studies that used interviews compared to those that used questionnaires (OR = 0.89, $p < 0.0001$). Likewise, the odds of presenting depression were 11% lower among studies that used medical records compared to those that used questionnaires (OR = 0.89, $p < 0.0001$). Results also showed that the odds of presenting depression were lower among studies that used PHQ and other questionnaires compared to the studies that used CESD, respectively (Table 2).

Results also showed that women were 1.05 more likely to present depression compared to men (OR = 1.05, $p = 0.03$). Community-based samples were 1.08 more likely to report a higher prevalence proportion compared to general population-based samples (OR = 1.08, $p < 0.0001$). No significant results for the other moderators, including year of publication, study type, region, sample size, and quality assessment were found (Table 2).

Discussion

The present systematic review and meta-analysis estimated the prevalence of depression among Black individuals living in a minority context in Western countries. Through 421 studies and a sample of 1,305,366 Black individuals living in 4 Western countries (USA, Canada, UK, and the Netherlands), the

pooled prevalence of clinically elevated depression was 20.2%. More than 1 in 5 Black individuals experience clinically elevated depression symptoms. The pooled prevalence of past-week depression symptoms was 26.6%, while it was 22.1% for two weeks, 21.6% for the past month, 9.1% for three months to the past year, and 16.6% for lifetime. According to the most comprehensive systematic review on the prevalence of depression, the pooled rates in the general population over 20 years across 30 countries were 12.9% for the past week, 7.2% for one-year, and 10.8% for a lifetime.[56] Compared to these results, the present study suggests a significant burden of depression among Black individuals living in Western countries. This burden can be explained by the poor social conditions and economic racial disparities experienced by Black people living in Western countries that include inadequate housing, social class and racial residential segregation, unemployment, underemployment, job insecurity, income inequality, social exclusion, poor access to health care, food insecurity, police brutality, racial profiling, and adverse immigration experiences.[29–36,57,58] In addition, Black people face different forms of racial discrimination in different spheres, including education, health and police violence, which impact the lives of the victims, but also the life of those who do not experience it directly. A study of 103,710 Black Americans showed that 49% of them were exposed to one or more police killings of Black people in their state of residence.[59] More importantly, this study showed that this exposure was associated with poor mental health during the days following these events of racial violence. A study conducted in Canada reveals that Black individuals with a very high level of racial discrimination experience were 36.42 times more likely to present severe symptoms of depression compared to Black individuals with a low level of racial discrimination experience 26. This burden could also be explained by the large number of community studies (N = 277) often conducted among Black people living in difficult social, health and economic conditions or having been exposed to family, community or racial violence (e.g. adverse childhood experiences, HIV, poverty, alcohol and substance use, racial discrimination experience, police brutality exposure). However, the prevalence of depression remains high in population studies (16.5%), suggesting a real burden of depression among Black people.

Although the results suggest that depression is common among Black people living in Western countries, we observed considerable disparities among Black people, depending on their socio-demographic profiles (gender, age group, living region, racial/ethnic group), as well as the years of publication, the evaluation method used and the questionnaire used (Table 1). However, the moderation analyses show few differences between these different groups (Table 2). They remain for Black women, who are more likely to have a

Moderators	Sample size[a]	n[b]	Prevalence (95% CI)	I²[b]	Statistics	p-value
Total	1,327,582	445	20.2 (18.7–21.7)	99.78	198037.70	<0.0001
Gender					6.32	0.01[c]
Men	89,085	75	18.5 (15.3–21.9)	99.31	10727.99	<0.0001
Women	586,238	173	24.3 (21.3–27.4)	99.84	104873.12	<0.0001
Racial-ethnic group					17.50	0.002[c]
Black	1,327,582	445	20.2 (18.7–21.7)	99.78	198132.00	<0.0001
Asian	249,230	54	13.4 (10.2–16.9)	99.74	20343.77	<0.0001
Latinx	1,035,608	136	21.0 (18.7–23.5)	99.85	90497.92	<0.0001
White	4,173,410	263	17.8 (16.3–19.2)	99.93	362062.78	<0.0001
Other	486,048	62	18.1 (14.5–21.9)	99.89	53378.15	<0.0001
Age					10.48	0.01[c]
Under 18	315,802	60	18.3 (14.4–22.7)	99.75	23227.54	<0.0001
Above 18	823,331	322	21.1 (19.6–22.7)	99.66	93403.59	<0.0001
65 years and older	123,408	49	15.8 (13.0–18.8)	99.41	8194.38	<0.0001
All ages	66,187	14	21.4 (13.5–30.5)	99.38	2108.38	<0.0001
Region					8.68	0.003[c]
North America	1,285,985	435	20.3 (18.8–21.9)	99.78	196713.87	<0.0001
Europe	36,264	9	13.8 (10.1–17.8)	98.84	691.74	<0.0001
Population					20.08	<0.0001[c]
General	802,978	170	15.4 (13.3–17.8)	99.86	120278.09	<0.0001
Community	526,164	275	23.4 (21.7–25.1)	99.49	53887.00	<0.0001
Evaluation period					208.66	<0.0001[c]
Past week	303,488	188	26.6 (24.6–28.6)	99.29	26302.12	<0.0001
Past 2 weeks	189,090	88	22.1 (19.2–23.1)	98.68	6618.37	<0.0001
Past month	26,556	18	21.6 (11.6–33.5)	99.78	7680.88	<0.0001
More than one month (past three, six, year)	123,067	51	9.1 (7.7–10.7)	98.76	4029.68	<0.0001
Lifetime	82,724	43	16.6 (12.9–20.8)	99.57	9711.05	<0.0001
Mixed	10,156	9	18.5 (12.7–25.1)	97.40	307.77	<0.0001
Unknown	592,501	48	11.4 (8.6–14.5)	99.90	48613.46	<0.0001
Measure					95.64	<0.0001[c]
Questionnaires	676,404	320	23.8 (22.3–25.3)	99.48	61753.30	<0.0001
Interviews	158,133	90	12.0 (10.1–14.0)	99.30	12663.03	<0.0001
Medical record	493,045	35	12.1 (8.9–15.8)	99.90	35006.21	<0.0001
Questionnaires					67.82	<0.0001[c]
CESD	303,197	159	28.2 (26.0–30.4)	99.44	28018.08	<0.0001
BDI	10,286	27	27.5 (22.7–32.5)	96.37	716.27	<0.0001
CDI	695	5	23.1 (7.2–44.2)	97.07	136.60	0.0001
GDS	1830	9	20.0 (11.6–30.0)	95.79	190.21	<0.0001
PHQ	171,789	57	20.1 (18.1–22.2)	98.73	4403.15	<0.0001
Other questionnaires	188,607	63	15.6 (13.5–17.9)	99.29	8707.44	<0.0001
Year of publication					12.14	0.007[c]
Below 2000	15,105	27	23.0 (16.3–30.3)	98.95	2479.73	<0.0001
2000–2009	111,054	125	23.5 (20.9–26.2)	99.02	11734.62	<0.0001
2010–2019	789,652	201	17.7 (15.6–19.9)	99.82	112596.65	<0.0001
2020–2024	411,771	92	20.6 (17.5–23.8)	99.83	52631.10	<0.0001
Study type					0.15	0.93[c]
Cross-sectional	916,692	350	20.1 (18.4–22.0)	99.77	149277.03	<0.0001
Longitudinal	215,451	67	20.1 (17.5–22.8)	99.46	12178.98	<0.0001
Cohort	194,483	25	21.4 (15.3–28.2)	99.90	24033.61	<0.0001
Sample size					1.77	0.18[c]
Within −2 to +2 SD (fall within mean N)	659,973	436	20.3 (18.7–21.7)	99.42	75403.01	<0.0001

(Table 1 continues on next page)

Moderators	Sample size[a]	n[b]	Prevalence (95% CI)	I[b]	Statistics	p-value
(Continued from previous page)						
Above +2 SD (2 SD above mean N)	667,609	9	13.1 (4.9–24.3)	99.99	107617.63	<0.0001
Quality assessment					1.48	0.48[c]
Below −1 SD	375,789	102	21.0 (18.1–24.2)	99.80	49582.78	<0.0001
Between −1 SD and +1 SD	820,756	274	20.4 (18.5–22.3)	99.75	108894.41	<0.0001
Above +1 SD	131,037	69	18.3 (14.9–21.9)	99.59	16790.90	<0.0001

CESD, Center for Epidemiological Studies Depression; BDI, Beck Depression Inventory; CDI, Children Depression Inventory; GDS, Geriatric Depression Scale; PHQ, Patient Health Questionnaire; SD, Standard deviation. [a]The sample size is different in this table due to repeated samples for different types of measures or more than two evaluation periods. [b]n is the number of included studies. Some studies used two different measures or had two different evaluation period or two different sample. Due to this reason, n is more than 421 actual studies that were included in the meta-analysis. [c]p-values for groups differences (the p-values next to each category is for heterogeneity test).

Table 1: **Unadjusted prevalence of depression among Black individuals.**

depressive disorder. Although this observation is in line with what is often observed in the scientific literature on the general population,[60] this result may be explained by the intersection of gender and race.[30,61–65] In fact, Black women are exposed both to discrimination linked to skin colour and gender and to the social conditions surrounding these two statuses (e.g. angry Black woman, sexual myths), which constitute major risk factors for their mood.[62,63,65] However, several studies carried out in Africa have shown the opposite to be true, with an equal prevalence between men and women and even a higher prevalence of depression among men in rural areas.[66–68] This is an observation that merits further investigation through future studies to understand the impact of gender roles in African and Western societies on depression.

The moderation analyses on race/ethnicity also only showed a significant difference between Black and Asian and White people (who are less likely to experience depression) confirming a burden of depressive disorder among Black individuals in Western countries. These results are particularly important when considering the strength of the Black-White mental health paradox, which is often consistent across age and gender for mood disorders.[69] Conceptualized in the US, the Black-White mental health paradox refers to the fact that Black people usually have lower rates of depression and anxiety compared to their White counterparts despite greater exposure to social and racial stressors known as risk factors for mental health problems.[70] This result is also important when considering the fact that mental health problems and particularly depression are stigmatized in Black communities and perceived as a sign of weakness.[71–73] In addition, the traumatic impacts of poor social and economic conditions and disparities are stalled by the fact that Black people have to stay alert to continue fighting against the various forms of discrimination they continue to experience in Western societies.[74]

Moderation analyses also showed that the method used to assess depression also played an important role. In fact, people assessed with semi-structured interviews and those whose results were taken from their medical records were less likely to have a depressive disorder. Although this was also observed in the general population, this result raises important questions. Is it Black people who under-report their depressive symptoms in face-to-face assessments out of social desirability, fear of stigma and discrimination? Or do mental health professionals underestimate depressive symptoms when they are the ones coding their responses? Or do Black people over-report symptoms of depression when they answer questionnaires? These are aspects that future studies should consider. These methodological aspects are very important because certain questionnaires such as the Center for Epidemiological Studies Depression (CESD) and the Beck Depression Inventory (BDI) and the Children Depression Inventory (CDI) have also been shown to be more sensitive in identifying depressive symptoms in Black people. Although it was necessary to integrate all the measures, the multiplicity of measures is still a limitation of this meta-analysis.

Several other limitations are worth noting. Firstly, the 421 studies included in this meta-analysis were only conducted in 4 countries (408 in USA, two in Canada, seven in the United Kingdom, two in the Netherlands, one in both the UK and the US and one in both Canada and the US). Thus 96.91% of the studies had a sample made up solely of Black Americans and 97.39% of the studies had at least one sub-sample of Black Americans and only 2.37% of the studies had no sample of Black Americans (10 studies). This limits the generalizability to other Western contexts. Furthermore, only 9 studies (2.14%) had a European sample. Yet Black people represent around 10 M people in Europe, including 2.4 M in the UK, 5–8% (3 M–5 M) of the French population, 1.3% in Italy and Spain, 2.2% in Portugal, 4.2% in the Netherlands, 3.6% in Belgium. The colourblind approach adopted in Canada and Europe is preventing studies from being carried out to gain a better understanding of the mental health situation of Black people and to develop programs that meet their real needs. The same questions apply to Australia and New Zealand, with China and Japan as well. In addition, the exclusion of studies that did not report data on Black individuals may introduce sampling bias, particularly when comparing depression prevalence across ethnic groups. This limitation should be acknowledged, and interpretations of the data for other ethnic groups should be made with caution. Certain moderators that could have an impact on the prevalence of depression, such as marital status, level of education, salary and sexual orientation, could not be evaluated and new studies should look into this. Similarly, new studies should assess the links between depression and social experiences, including racial discrimination, adverse

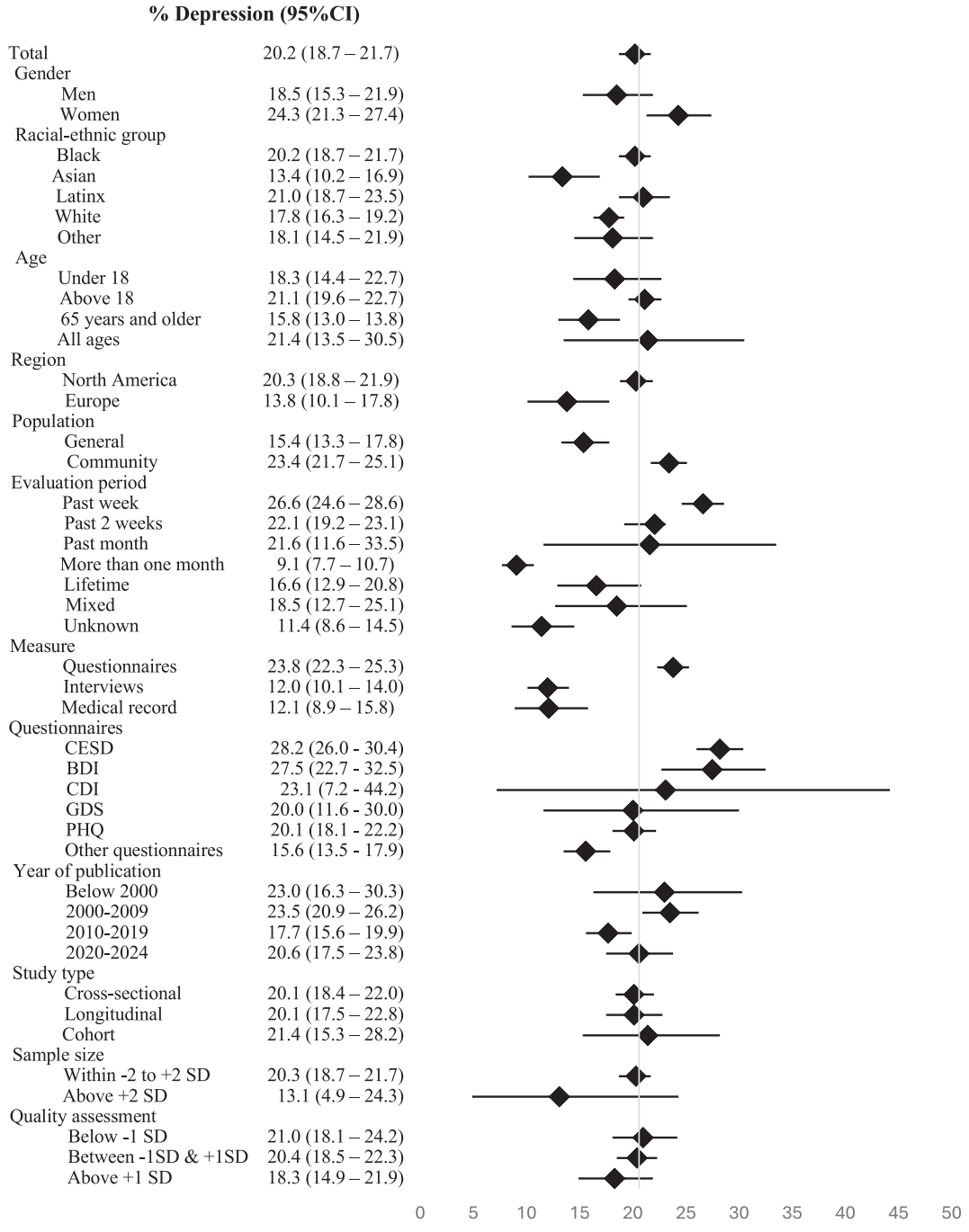

Fig. 3: Forest plot of the prevalence rates of depression among Black individuals across explored moderators. Error bars represent 95% CIs.

childhood experiences and community violence, and consider adding adjusted odd ratios to better control confounding factors. Moreover, the fact that lifetime prevalence is lower than past-week prevalence may seem counterintuitive. However, closer examination suggests that this is not the case. Few studies report both lifetime and past-week depression rates; instead, these are often separate samples and should be interpreted as such. Additionally, people tend to exaggerate their depressive symptoms when they have recently experienced them and minimize them once they have recovered.[75] Finally, the results of the publication bias analyses may suggest different perspectives. Studies with higher estimated proportions of depressive symptoms are more likely

Moderators	OR (95% CI)	*p*-value
Gender (reference: men)		
Women	**1.05 (1.01–1.10)**	0.03
Racial-ethnic group (reference: Black)		
Asian	**0.94 (0.90–0.98)**	0.004
Latinx	1.01 (0.98–1.04)	0.55
White	**0.98 (0.95–1.00)**	0.04
Other	0.98 (0.94–1.02)	0.41
Age (reference: under 18)		
Above 18	1.02 (0.98–1.07)	0.34
65 years and older	0.96 (0.91–1.02)	0.23
All ages	1.03 (0.93–1.13)	0.57
Region (reference: North America)		
Europe	0.93 (0.84–1.04)	0.18
Population (reference: general)		
Community	**1.08 (1.05–1.12)**	<0.0001
Evaluation period (reference: past week)		
Past 2 weeks	**0.95 (0.92–0.99)**	0.02
Past month	0.96 (0.89–1.03)	0.27
More than one month (past three, six, year)	**0.84 (0.80–0.88)**	<0.0001
Lifetime	**0.91 (0.87–0.96)**	0.0002
Mixed	0.92 (0.83–1.02)	0.11
Unknown	**0.86 (0.82–0.91)**	<0.0001
Measure (reference: questionnaires)		
Interviews	**0.89 (0.86–0.92)**	<0.0001
Medical record	**0.89 (0.84–0.94)**	<0.0001
Questionnaire (reference: CESD)		
BDI	0.99 (0.93–1.06)	0.78
PHQ	**0.93 (0.89–0.97)**	0.002
GDS	0.92 (0.83–1.03)	0.14
CDI	0.96 (0.83–1.10)	0.56
Other questionnaires	**0.89 (0.85–0.93)**	<0.0001
Year of publication (reference: below 2000)		
2000–2009	1.00 (0.94–1.07)	0.94
2010–2019	0.95 (0.89–1.01)	0.12
2020–2024	0.97 (0.91–1.04)	0.41
Study type (reference: cross-sectional)		
Longitudinal	1.00 (0.96–1.05)	0.95
Cohort	1.01 (0.95–1.08)	0.72
Sample size (reference: within −2 to +2 SD)		
Above +2 SD (2 SD above mean N)	0.94 (0.84–1.04)	0.23
Quality assessment (reference: below −1 SD)		
Between −1 SD and +1 SD	0.99 (0.96–1.03)	0.70
Above +1 SD	0.97 (0.93–1.02)	0.29

CESD, Center for Epidemiological Studies Depression; BDI, Beck Depression Inventory; CDI, Children Depression Inventory; GDS, Geriatric Depression Scale; PHQ, Patient Health Questionnaire; SD, Standard deviation. The significant moderators are in bold in the table.

Table 2: **Moderation of the prevalence rates in Black individuals (unadjusted ORs).**

to be published, potentially leading to an overestimation of prevalence. Moreover, publication bias may also be related to the presence of unexamined moderators beyond those included in this article. For example, it would be important to explore factors related to socioeconomic status, such as education, income, and occupation. Although we intended to analyze these variables, they were rarely reported in the articles and lacked the standardized format necessary for inclusion.

Since depression is common among Black people living in minority situations in the West, the need to develop general and specific prevention and intervention programs is critical. However, prevention begins with broad social and educational programs aimed at eliminating both interpersonal, institutional and systemic racism and the poor social and economic conditions that surround the lives of Black people in the West.[31,35,36,58] Prevention programs must also be based on care, as it is known that Black people have less access to mental health care, but also mistrust care when it is available.[76] This requires the implementation of culturally appropriate and anti-racist care with clinicians who are aware of racial issues and their impact on the mental health of Black people,[77] who are trained in how to take them into account in the assessment of mental disorders and depression in particular, who have a humanistic approach to medication, who know how to address these issues proactively in psychotherapy and who know how to take into account the specific needs of children, adolescents and their families.[78] This meta-analysis also showed the need for studies in other European countries (e.g. France, Italy, Portugal, Spain, Germany) and in Canada. Future studies are also needed on various issues, including the link between racial discrimination and depression, among older adults, children and adolescents. These studies need to consider an intersectional approach that can address not only racial/ethnic issues, but also gender and social class. They also need to examine the consequences associated with depression among Black individuals in terms of physical health (cardiovascular diseases, obesity), social functioning (couple and family, schooling for young people, work for adults), life satisfaction, and somatization.

In conclusion, as depression is a burden in Black communities, and given the social and economic consequences of depression, there is an urgent need to mobilize public health agencies, research funding agencies and clinicians. Synergies must be created, but nothing must be done without the inclusion of the Black communities to ensure that any new developments do not further harm and undermine them.

Contributors

Dr. Cénat and Dr. Moshirian Farahi have full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. Concept and design: Cénat, Moshirian Farahi, Dalexis, Gakima, Darius Labelle. Acquisition and extraction of data: Darius, Mukunzi, Gakima, Diao, Mansoub, Dalcé, Bangoura, Mkhatri, Collom, Belachew, Josiah, Weisemberg, Labelle, Dalexis, Moshirian Farahi, Cénat. Statistical analysis: Moshirian Farahi and Cénat. Interpretation of data: All the authors. Drafting of the manuscript: Cénat, Moshirian Farahi, Dalexis, Darius, Labelle. Critical revision of the

manuscript for important intellectual content: Cénat, Moshirian Farahi, Dalexis, Labelle. Administrative, technical, or material support: Gakima, Moshirian Farahi, and Cénat. Supervision: Cénat.

Data sharing statement

The data is available upon request to the corresponding author.

Declaration of interests

There is no conflict of interest for any author.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.lana.2025.101027.

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