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Impact of mental health stigma on help-seeking in the Caribbean: systematic review

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Full Title:	Impact of mental health stigma on help-seeking in the Caribbean: systematic review
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Keywords:	Caribbean; stigma; help-seeking; Discrimination; barriers to care; mental health; systematic review
Abstract:	Background Mental health conditions often go untreated, which can lead to long-term poor emotional, social physical health and behavioural outcomes, and in some cases, suicide. Mental health-related stigma is frequently noted as a barrier to help seeking, however no previous systematic review has considered evidence from the Caribbean specifically. This systematic review aimed to address two research questions: (1) What is the impact of mental health stigma on help-seeking in the Caribbean? (2) What factors underlie the relationship between stigma and help-seeking in the Caribbean? Methods A systematic search was conducted across six electronic databases (Medline, Embase, Global Health, PsychInfo, Scopus and LILACS). The search included articles published up to May 2022. Experts in the field were consulted to provide publication recommendations and references of included studies were checked. Data synthesis comprised of three components: a narrative synthesis of quantitative findings, a thematic analysis of qualitative findings, and a meta-synthesis combining these results. Results The review included nine articles (reflecting eight studies) totaling 1256 participants. A conceptual model was derived from the meta-synthesis, identifying three themes in relation to mental health stigma and help-seeking in the Caribbean: (i) Making sense of mental health conditions'; (ii) Anticipated/Experienced stigma-related experiences and (iii) Individual characteristics. Conclusion This review provides insights into the relationship between mental health stigma and help-seeking in the Caribbean based upon the current research evidence. This can be applied in the design of culturally appropriate future research, policy, and practice, to target and decrease stigma, and increase help-seeking in the Caribbean.
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Response to Reviewers:	Additional Editor Comments Abstract-Conclusion: “This can be applied in the design of culturally appropriate future research, policy, and practice, to target and decrease stigma, and increase help-seeking in the Caribbean.” This statement should be modified. As it is implies that the authors said this can be used to design future research and also design policy, and practice. My suggestion: “This can be applied in the design of culturally appropriate future research, and to

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support policy and practice towards stigma reduction, and improved mental care help-seeking in the Caribbean."

AUTHORS' RESPONSE: We thank the editor for this suggestion. We have incorporated this edit into the manuscript as shown in the Abstract-page 3 lines 46-48.

Methods:
According to the authors: "This systematic review addresses two research questions viz:
(1) What is the impact of mental health stigma on help-seeking in the Caribbean?
(2) What factors underlie the relationship between stigma and help-seeking in the Caribbean?

To achieve objectives (1) and (2), there is the need to undertake a process of triangulation of the data. I have read through the data extraction and appraisal, but I have not seen any mention of triangulation. Does it mean this was captured/presented in some other terms/terminologies?

I know that Triangulation facilitates validation of data through cross verification from more than two sources. Importantly, it also tests the consistency of findings obtained through different instruments and increases the chance to control, or at least assess some of the threats or multiple causes influencing our results. Triangulation will add great value to this paper.

AUTHORS' RESPONSE: Thank you for raising this concern. To achieve objectives (1) and (2), a process of triangulation took place though a meta-synthesis of the quantitative and qualitative data, however we did not use the term triangulation in the original submission and express it in this way. To make it clearer for the reader, we have amended this sentence in the Method-Data synthesis section to make it explicit:

"Lastly, the data underwent a process of triangulation through a thematic meta-synthesis, where the findings from the quantitative and qualitative syntheses were integrated." (page 9, lines 170-171).

Results - Studies with 3 participants (mentioned in the results section) should be excluded. It is not scientifically appropriate to use findings from 3 to 5 participants (even from qualitative)

AUTHORS' RESPONSE: We thank the editor for their thoughtful response on this. As we are consolidating insights from an area where there is limited information from this geographical region, we believe it is important to include what literature is available to us. We acknowledge that studies with fewer participants may not be representative, however these studies have undergone a quality assessment, and we believe the findings should still be considered as such studies can provide rich, interesting data.

Additionally, the findings of this study aligned with the findings of the other qualitative studies included in this review where the data contributed to common themes generated from the thematic analysis (Making sense of mental health conditions', 'Anticipated/Experienced mental health experiences - illustrated in Supplementary Information - S4 Appendix Themes and subthemes with example participant quotations for included qualitative studies), and thus were not making a singular point.

We want to acknowledge in the manuscript that we recognise some of the included studies have small samples and the implications this may have, and have subsequently added the following extract into the Discussion-Limitations and strengths:

"Some of the included studies had small samples, thereby caution may be needed when interpreting the findings of this review. Nonetheless, the findings from studies with lower participant numbers did not drive any single conclusions drawn in this research but rather corroborated findings from other studies, and by including all eligible studies regardless of sample size this review was able to analyse and synthesise important and interesting data from the limited existing literature to provide a thorough evaluation." (page 22 lines 406-411)

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	Results - I perceive that to arrive at an efficient conceptual model, it should be based on triangulation of the data from the meta-synthesis. AUTHORS' RESPONSE: Thank you for this comment. We agree that triangulation is required for an efficient conceptual model. The meta-synthesis is a result of triangulating the quantitative and qualitative data, however as we mention in a comment above, we previously did not explicitly state this. This how now been amended as demonstrated in the following sentence: "The results from the quantitative and qualitative syntheses have been triangulated to produce an overall meta-synthesis." (page 18, lines 313-314) Discussion, future research - These sections are well written. AUTHORS' RESPONSE: We thank the editor for their positive feedback on these sections. Implications for policy: The authors said, "There is a need to incorporate mental health knowledge into early education and public awareness that includes stigma-reducing strategies". It seems not too logical connecting early education and public awareness to stigma reduction. I suggest that it would be more appropriate if we think of the interventions that involves community-based mental health education and health promotion that leverages public awareness on mental health, stigma and help-seeking. AUTHORS' RESPONSE: Thank you for this comment. We agree with the editor's reflection and suggestion and have made the following edit: 'There is a need for interventions that involve community-based mental health education and health promotion to contribute to public awareness on mental health, stigma and help-seeking." (page 21, lines 390-392)
Additional Information:	
Question	**Response**
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Competing Interests Use the instructions below to enter a competing interest statement for this submission. On behalf of all authors, disclose any competing interests that could be perceived to bias this work—acknowledging all financial support and any other relevant financial or non-financial competing interests. This statement is required for submission and **will appear in the published article** if the submission is accepted. Please make sure it is accurate and that any funding sources listed in your Funding Information later in the submission form are also declared in your Financial Disclosure statement. View published research articles from *PLOS ONE* for specific examples.	The authors have declared that no competing interests exist.

NO authors have competing interests Enter: *The authors have declared that no competing interests exist.* **Authors with competing interests** Enter competing interest details beginning with this statement: *I have read the journal's policy and the authors of this manuscript have the following competing interests: [insert competing interests here]* * typeset	
Ethics Statement Enter an ethics statement for this submission. This statement is required if the study involved: • Human participants • Human specimens or tissue • Vertebrate animals or cephalopods • Vertebrate embryos or tissues • Field research Write "N/A" if the submission does not require an ethics statement. General guidance is provided below. Consult the submission guidelines for detailed instructions. **Make sure that all information entered here is included in the Methods section of the manuscript.**	N/A

Format for specific study types **Human Subject Research (involving human participants and/or tissue)** • Give the name of the institutional review board or ethics committee that approved the study • Include the approval number and/or a statement indicating approval of this research • Indicate the form of consent obtained (written/oral) or the reason that consent was not obtained (e.g. the data were analyzed anonymously) **Animal Research (involving vertebrate animals, embryos or tissues)** • Provide the name of the Institutional Animal Care and Use Committee (IACUC) or other relevant ethics board that reviewed the study protocol, and indicate whether they approved this research or granted a formal waiver of ethical approval • Include an approval number if one was obtained • If the study involved *non-human primates*, add *additional details* about animal welfare and steps taken to ameliorate suffering • If anesthesia, euthanasia, or any kind of animal sacrifice is part of the study, include briefly which substances and/or methods were applied **Field Research** Include the following details if this study involves the collection of plant, animal, or other materials from a natural setting: • Field permit number • Name of the institution or relevant body that granted permission	
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A Data Availability Statement describing where the data can be found is required at submission. Your answers to this question constitute the Data Availability Statement and **will be published in the article**, if accepted. **Important:** Stating 'data available on request from the author' is not sufficient. If your data are only available upon request, select 'No' for the first question and explain your exceptional situation in the text box. Do the authors confirm that all data underlying the findings described in their manuscript are fully available without restriction?	
Describe where the data may be found in full sentences. If you are copying our sample text, replace any instances of XXX with the appropriate details. • If the data are **held or will be held in a public repository**, include URLs, accession numbers or DOIs. If this information will only be available after acceptance, indicate this by ticking the box below. For example: *All XXX files are available from the XXX database (accession number(s) XXX, XXX.*). • If the data are all contained **within the manuscript and/or Supporting Information files**, enter the following: *All relevant data are within the manuscript and its Supporting Information files.* • If neither of these applies but you are able to provide **details of access elsewhere**, with or without limitations, please do so. For example: *Data cannot be shared publicly because of [XXX]. Data are available from the XXX Institutional Data Access / Ethics Committee (contact via XXX) for researchers who meet the criteria for access to confidential data.* *The data underlying the results presented in the study are available from (include the name of the third party*	All relevant data are within the manuscript and its Supporting Information files.

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1 Impact of mental health stigma on help-seeking in the Caribbean: systematic
2 review

3 Mental health stigma and help-seeking

4

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23

// Abstract

Background

Mental health conditions often go untreated, which can lead to long-term poor emotional, social physical health and behavioural outcomes, and in some cases, suicide. Mental health-related stigma is frequently noted as a barrier to help seeking, however no previous systematic review has considered evidence from the Caribbean specifically. This systematic review aimed to address two research questions: (1) What is the impact of mental health stigma on help-seeking in the Caribbean? (2) What factors underlie the relationship between stigma and help-seeking in the Caribbean?

Methods

A systematic search was conducted across six electronic databases (Medline, Embase, Global Health, PsychInfo, Scopus and LILACS). The search included articles published up to May 2022. Experts in the field were consulted to provide publication recommendations and references of included studies were checked. Data synthesis comprised of three components: a narrative synthesis of quantitative findings, a thematic analysis of qualitative findings, and a meta-synthesis combining these results.

Results

The review included nine articles (reflecting eight studies) totaling 1256 participants. A conceptual model was derived from the meta-synthesis, identifying three themes in relation to mental health stigma and help-seeking in the Caribbean: (i) Making sense of mental health conditions'; (ii) Anticipated/Experienced stigma-related experiences and (iii) Individual characteristics.

Conclusion

This review provides insights into the relationship between mental health stigma and help-seeking in the Caribbean based upon the current research evidence. This can be applied in the design of culturally appropriate future research, and to support policy and practice towards stigma reduction, and improved mental care help-seeking in the Caribbean.

49 # Introduction

50 Mental health conditions are one of the leading causes of disability worldwide [1]. In the Caribbean,
51 increasing concerns over growing rates of mental health conditions have been identified [2]. There
52 are many contributory factors to this anticipated increase in prevalence, including an increasingly
53 aging population, and economic decline, which is linked to another major influence - the
54 consequences of the COVID-19 pandemic [3,4]. Traditionally in the Caribbean, poor mental health
55 and expressing emotions has broadly been culturally and socially stigmatised, associated with
56 shame, personal weakness, and a lack of commitment to God, which acts as a barrier to seeking
57 mental health support [5-7].

58 Goffman [8] defined *stigma* as the 'situation of the individual who is disqualified from full social
59 acceptance' (p9). Stigma can be a key contributor to the negative attitudes that surround mental
60 health [9]. Phrases such as "mental illness", "mental health problems" and "mentally ill", can carry
61 negative connotations and frame an individual's identity as a product of their condition. For this
62 reason, this paper will be using the terms "mental health" and "mental health conditions", although
63 it is understood that these phrases have been used interchangeably with other terminology.

64 Stigma can lead to the underutilization of mental health services, and has been identified as an
65 important barrier to help-seeking [10]. To date, three main systematic reviews [10-12] have explored
66 mental health-related stigma and help-seeking. All these reviews found that stigma had a clear and
67 negative impact on help-seeking. These reviews included studies primarily from the USA, Canada,
68 Europe or Australia and New Zealand. None of the reviews included studies in the Caribbean. This
69 may limit the generalisations that can be drawn to this region, as a systematic review by Mascayano
70 et al [13] identified there to be cultural nuances in mental health-related stigma in Latin America and
71 the Caribbean, differing from those identified in studies conducted in Western European countries.

72 There has only been one review that has had a focus on the impact of mental health stigma on help-
73 seeking in the Caribbean. A scoping review by Gonzalez [14] investigated the "Impact of stigma on
74 help-seeking behaviour for people with mental disorders in Latin America and the Caribbean". There
75 were 11 studies included, three of which were from the Caribbean. This review provided a useful
76 preliminary assessment of the relationship between mental health-related stigma and help-seeking
77 in these contexts, identifying stigma as a barrier to help-seeking. It is important to note that there
78 are cultural differences between Latin America and the Caribbean, so the conclusions drawn from
79 the Latin American studies may not be relevant to the Caribbean cultural context. There may also be
80 differences between Caribbean countries, as this region is highly heterogenous [15]. Thus, there is
81 scope and value in conducting an updated search and a comprehensive synthesis of the evidence in
82 the Caribbean context specifically through a systematic review.

83 This systematic review is the first to explore the impact of mental health stigma on help-seeking in
84 the Caribbean. This review aims to synthesise current evidence on the impact of mental health
85 stigma and help-seeking in the Caribbean. This will be addressed through two research questions:

86 (1) What is the impact of mental health stigma on help-seeking in the Caribbean?

87 (2) What factors underlie the relationship between mental health stigma and help-seeking in the
88 Caribbean?

89 Method

90 The review protocol was registered a-priori with PROSPERO (ID: CRD42022319634) and was
91 conducted in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses
92 (PRISMA) guidelines (see S1 Checklist).

Search strategy and selection of studies

Six electronic databases (Medline, Embase, Global Health, PsychInfo, Scopus and LILACS) were searched in May 2022. Subject headings and keywords were related to the Caribbean, mental health, and stigma (full list of search terms shown in S2 File). Help-seeking was not included as a subject heading with relevant keywords to not limit the amount of potentially relevant studies that may be generated from this initial search. Experts in the field were contacted to provide further publication recommendations, and reference lists of included papers were hand-searched by the main author (J-BG) for eligible papers not detected in the original search.

The inclusion criteria were full-text, data-based, peer-reviewed articles, of any study design (quantitative, qualitative or mixed methods), published up to May 2022 in English or Spanish (see Table 1). Studies were eligible for inclusion if they explored the relationship between mental health-related stigma and mental health-related help-seeking in individuals living in the Caribbean. All types of stigma were included in this review, and the definitions used are guided by the Lancet Commission's report on stigma and discrimination in mental health [16]. This includes: self-stigma, stigma by association, public stigma, and structural discrimination. This review includes all areas of help-seeking, including attitudes, intentions, and behaviours.

All results from this search were imported into Endnote20 (Clarivate Analytics), where deduplication was applied. The remaining studies were uploaded to Rayyan [17] for title and abstract screening. All titles and abstracts were screened by author J-BG. Authors KGD and CG independently screened a randomly selected 20% of the sample (10% each) for consistency, and to help ensure all relevant studies were included in the review. Discrepancies were resolved by discussion and arbitration, where any further clarification over the inclusion criteria was discussed and amendments appropriately made.

Full-text papers were obtained and assessed by author J-BG against the inclusion and exclusion criteria. Authors KGD and CG independently screened a randomly selected 10% sample

118 each. Discrepancies were resolved by discussion, and where necessary arbitration with another
119 author (PCG). There was uncertainty over one paper, where author PCG made the decision as to
120 whether it should be included. Author KGD assessed full papers published in Spanish for eligibility
121 solely due to the linguistic abilities of the team.

122

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125

126 **Table 1**. **Inclusion and Exclusion Criteria.**

Participants		
	Include	Individuals living in the Caribbean
	Exclude	Persons help-seeking on behalf of another individual Professional caregivers Caribbeans that do not live in the Caribbean region
Stigma		
	Include	Any type of stigma relating to or associated with mental health conditions including: - Self stigma, also known as internalized stigma (when an individual applies negative views and attitudes towards themselves) - Stigma by association, also referred to as affiliate or courtesy stigma (experiencing disapproval or discrimination due to the association with stigmatized individuals) - Public stigma, which includes knowledge (misinformation), attitudes (prejudice) and behaviour (discrimination) - Structural stigma, also known as systematic or organisational stigma (inequities that result from laws, policies and practices)
	Exclude	Stigma relating to other social attributes Stigma relating to HIV/AIDS, cancer, sexual behaviour, abortion, epilepsy, leprosy or other situations not directly focusing on mental health
Help-Seeking		
	Include	Help-seeking for a mental health condition or any self-defined psychological, emotional or behavioural concern Measures of help-seeking-related attitudes, intentions and behaviours and relating to any stage of help-seeking from seeking initial informal help to service use
	Exclude	Help-seeking for reasons other than mental health-related concerns, e.g., intellectual disabilities, epilepsy, or dementia
Study Type		
	Include	Data-based, full-text, peer-reviewed articles Study designs that include any type of quantitative, qualitative or mixed method studies Articles published in English or Spanish Articles published up to May 2022
	Exclude	Non-data based or non-peer-reviewed articles, e.g., conference proceedings, revisions, research protocols, editorials, comments, letters, and dissertations or other ‘grey literature’

127

128

Data extraction

Author J-BG extracted data from all included studies using a review-specific data extraction form developed using Microsoft Excel. Data extracted from all study types included: author, year, title, aim, country, study design, sample characteristics, type of mental health condition addressed, aspect of stigma explored, aspect of help-seeking explored and key findings relating to the impact of mental health-related stigma on help-seeking – extracted from both original data and author's reflections from the results section only, unless results and discussion sections were combined. For quantitative studies, the measures of stigma and help-seeking used were also extracted. For qualitative studies, the method of data collection and analysis, and relevant data extracts and authors comments were recorded. Author KGD independently extracted data from two randomly selected papers of each design type for consistency. The independently extracted results were compared, and any discrepancies were discussed and resolved. It was established that consistency in extraction had been achieved, following which data extraction for the remaining papers were conducted by author J-BG only.

Quality appraisal

Author J-BG conducted a quality assessment of all included studies using the Mixed Methods Appraisal Tool (MMAT) [18]. Five quality criteria are listed for each study design (e.g., Is the sample representative of the target population? Are the findings adequately derived from the data?), where responses are 'Yes', 'No' and 'Can't tell'. Following the guidance from Hong et al. [18], rather than calculating an overall score for each paper, a more detailed presentation of the ratings of each criterion was constructed to appraise the quality. Authors J-BG and KGD independently assessed the same two quantitative and qualitative papers to determine consistency, after which the remaining papers were appraised by author J-BG alone.

152 ## Data synthesis

153 Data synthesis was conducted in three stages. Following guidance from the Evidence for Policy and
154 Practice Information and Co-ordinating Centre (EPPI-Centre; [19], quantitative and qualitative
155 research evidence were considered independently before merging.

156 First, a narrative synthesis [20] was conducted on findings from quantitative evidence. A preliminary
157 synthesis was developed, providing an initial description of the results of the included studies. The
158 relationship between mental health-related stigma and help-seeking within and between studies
159 was explored, with continuous reference to the extracted data, to help identify factors that influence
160 this relationship. Lastly, the robustness of the synthesis was assessed. This was achieved by
161 appraising the methodological quality of the included studies using the MMAT, and how the
162 evidence was synthesised [21]. A textual narrative is provided in the results.

163 The second stage involved a thematic analysis [22] conducted on findings from qualitative evidence.
164 Extracted data was input into the qualitative analysis software NVivo (Release 1.7.1). Initial codes
165 were generated to develop a codebook by author J-BG, which continued to be revised when
166 appropriate after the coding of each paper. Codes were then clustered into groups to explore
167 meanings, interconnections, and patterns. This led to the development of initial themes, refinement
168 of main themes and subthemes, which were reviewed by authors PCG and TTS, to then be
169 structured into a thematic map.

170 Lastly, the data underwent a process of triangulation through a thematic meta-synthesis, where the
171 findings from the quantitative and qualitative syntheses were integrated. This involved two stages.
172 First, the quantitative-based synthesis papers were re-reviewed to see which factors were also
173 present in the qualitative evidence. Next, it was determined whether any relevant factors were
174 identified in the quantitative papers that did not arise from the qualitative papers, and vice versa.
175 The thematic map developed from the qualitative synthesis was extended to reflect findings from
176 the quantitative synthesis.

177 # Results

178 The initial database search returned 3,765 potentially relevant papers (see Fig. 1). Excluded as
179 duplicates were 1,682 papers. A further 2,002 papers were excluded as ineligible under the review
180 criteria. The remaining 81 papers were full-text assessed (details of the papers excluded at full-text
181 stage are described in S3 File). Nine papers met the review inclusion criteria. No additional results
182 were obtained through contacting experts or searching through reference lists. A summary of the
183 included papers is provided in Table 2, with full details described in S4 File.

184

185 **Fig 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow**
186 **diagram .**

187

188 **Table 2. Summary of included papers.**

189

Author	Country	Study Design	Sample Characteristics	Aspect of Stigma	Aspect of Help-Seeking	Key findings
Quantitative Papers						
Jackson Williams [23]	Jamaica	Cross-sectional survey	146 male and 193 female adolescents	Public Stigma, Perceived Stigma	Attitudes	"…for a 'psychological problem'…results indicate that students would seek help first from a medical doctor, followed by a faith healer and then from their teacher. Friends and family members were the last source of help…Across all disorders, with the exception of schizophrenia, students consistently identified friends and family members as their first choice of help. For schizophrenia, students reported that they would seek help from a psychologist/ psychiatrist first" (p467, 469)
Jackson Williams [24]	Jamaica	Cross-sectional survey	146 male and 193 female adolescents	Public Stigma	Attitudes	"results indicate that more negative opinions about mental illness, or more authoritarian and socially restrictive opinions, as well as less benevolent opinions were associated with less positive psychological help-seeking attitudes" (p371)
Maloney et al. [25]	Jamaica	Cross-sectional survey	Survey 1 - 107 adolescents Survey 2 – 56 of the 107 adolescents from Survey 1	Public Stigma	Attitudes	"When asked to indicate barriers to seeking mental health care, respondents most frequently reported the problem was too personal/embarrassing...or not serious enough" (p4)
Nohr et al. [26]	Cuba	Cross-sectional survey	136 female and 59 male adults	Public Stigma	Attitudes	"community attitudes were a significant predictor of help-seeking attitudes" (p8)
Ramkissoon et al. [27]	Trinidad	Cross-sectional survey	136 female and 22 male university students	Public Stigma	Behaviours	"Significant associations existed between perceiving mental illness to be caused by supernatural factors, seeking religious/spiritual intervention... and seeking religious/spiritual intervention as the first in the health-seeking pathway" (p332)
Wagenaar et al. [28]	Haiti	Cross-sectional survey	408 adults	Public Stigma, Cultural Stigma	Intentions	"Persons who stated that suffering from mental distress is never an individual's fault were 3.5 times as likely as others to respond that they would turn to God first over hospitals or clinics and were .4 times as likely to respond that they would go to other community-based providers first compared with hospitals or clinics. Individuals responding that disasters can cause mental distress were 2.8 times as likely to respond that they would turn to God over hospitals or clinics." (p368-369)

Qualitative Papers						
Hannold et al. [29]	Puerto Rico	Semi-structured interview	8 veterans and 8 family members	Public Stigma	Attitudes	"Veterans may deny the need for psychological treatment because of stigma surrounding mental illness…FMs (family members) also perceived the stigma of mental illness to be real and problematic." (p385)
James et al. [30]	Jamaica	Semi-structured interview	3 case studies (24 years old, female, paranoid schizophrenia; 45 years old, female, bipolar; 19 years old, male, schizophrenia)	Public Stigma, Cultural Stigma	Behaviours	"The effects of the supernatural as the main cause of illness was a pervasive theme throughout the interviews. This in turn influenced the treatment that the individuals requested." (p259)
Liu et al. [31]	Saint Vincent and the Grenadines	Semi-structured interview	30 church leaders	Public Stigma	Attitudes	"Those who had drinking problems tended to stray from and avoid the church, largely out of fear of condemnation: 'There are some sins members wouldn't want to confess because it's too shameful. Alcoholism is one of those issues.' " (p1086)

190

191

192 All included papers were published between 2011 and 2021, and were written in English. The
193 number of participants ranged from three to 408 subjects. Two papers used data from the same
194 study [23,24]. Studies were conducted in Jamaica (37.5%, n=3), Trinidad (12.5%, n=1), Haiti (12.5%,
195 n=1), Cuba (12.5%, n=1), Puerto Rico (12.5%, n=1), and St Vincent and the Grenadines (12.5%,
196 n=1). Six (66%) papers reported quantitative data, and three papers (33%) reported qualitative data.
197 Five papers (55%) had a main focus on both stigma and help-seeking. Three of the five papers
198 explored public stigma and help-seeking attitudes, one focused on public stigma and help-seeking
199 behaviours, and one on both public and cultural stigma and help-seeking behaviours. The remaining
200 four papers (44%) focused on help-seeking attitudes and intentions, where stigma was an element of
201 the study. In only one paper (11%), did all participants have experience of mental health difficulties.
202 Four papers (44%) did not specify a mental health condition, but instead focused on mental
203 health/mental health conditions as a whole. Specific conditions were explored across the remaining
204 5 articles (55%): depression, anxiety, schizophrenia, attention deficit/hyperactivity disorder-
205 combined type (ADHD), conduct disorder, eating disorder not otherwise specified, substance abuse,
206 bipolar disorder, and alcoholism.

207 The overall methodological quality of the included papers was moderate, with the quantitative
208 papers being of poorer standard. One qualitative paper (11%) satisfied all five MMAT criteria, one
209 (11%) satisfied four criteria, and the other (11%) satisfying three criteria, with issues relating to the
210 appropriateness of the qualitative approach, data collection methods, and how findings were
211 derived from the data. Three quantitative papers (33%) satisfied three out of five criteria, and the
212 remaining three papers (33%) met two out of five criteria. This was mostly due to issues concerning
213 sample representativeness, appropriateness of methods, and a lack of reporting on response rates.
214 An overview of the quality appraisal of the quantitative and qualitative papers is presented in Table
215 3.

216

217 **Table 3. Overview of the quality of included quantitative and qualitative papers.**

218 Quality Appraisal Checklist item* (Y=yes, criteria met; N=no, criteria not met; ?=can't tell)

219

	1)	2)	3)	4)	5)	Number of criteria met
Quantitative Papers						
Jackson Williams [23]	Y	n	n	?	y	2/5
Jackson Williams [24]	Y	n	y	?	y	3/5
Maloney et al. [25]	Y	n	n	n	y	2/5
Nohr et al. [26]	Y	n	y	?	y	3/5
Ramkissoon et al. [27]	N	n	y	y	y	3/5
Wagenaar et al. [28]	Y	?	n	?	y	2/5
Qualitative Papers						
Hannold et al. [29]	Y	n	y	y	y	4/5
James et al. [30]	Y	y	y	y	y	5/5
Liu et al. [31]	?	y	?	y	y	3/5

Quantitative Criteria: 1) Is the sampling strategy relevant to address the research question? 2) Is the sample representative of the target population? 3) Are the measurements appropriate? 4) Is the risk of nonresponse bias low? 5) Is the statistical analysis appropriate to answer the research question?

Qualitative Criteria: 1) Is the qualitative approach appropriate to answer the research question? 2) Are the qualitative data collection methods adequate to address the research question? 3) Are the findings adequately derived from the data? 4) Is the interpretation of results sufficiently substantiated by data? 5) Is there coherence between qualitative data sources, collection, analysis and interpretation?

220

221

222 ## Quantitative synthesis

223 Six papers reported quantitative evidence, captured from 1,207 participants. All studies were cross-
224 sectional self-completed surveys. The quality of the quantitative papers overall was average to
225 below average, meeting two to three out of five criteria. The narrative synthesis of these data is
226 presented in terms of: Associations between stigma and help-seeking and Stigma-related barriers to
227 help-seeking.

228 ### Associations between stigma and help-seeking

229 Four papers reported an association between stigma and help-seeking, including data from 1100
230 participants. Two studies (50%) were conducted with the general population [26,28]. The remaining
231 two studies were conducted on adolescents [24] and university students [27].

232 Summarising the statistically significant findings, negative community attitudes significantly predict
233 negative help-seeking attitudes [26]. Opinions of mental health conditions that were authoritarian,
234 socially restrictive, or less benevolent, reflecting the attitudes aspect of public stigma, were
235 associated with greater negative attitudes towards professional help-seeking [24]. A belief that the
236 cause of mental health conditions is not the fault of the individual, reflecting the attitudes aspect of
237 public stigma, led to a greater likelihood of seeking care from religious sources compared to
238 hospitals or clinics [28]. Similarly, attributing the cause of mental health conditions to supernatural
239 or medical causes, reflecting knowledge and attitudes aspects of public stigma were both associated
240 with a willingness to seek help from both religious and medical sources [27].

241 Stigma-related barriers to help-seeking

242 Two papers reported data on the stigma-related barriers to help-seeking [23,25] including data from
243 446 participants. Both studies were conducted on adolescents.

244 Jackson Williams [23] found that the stigma attached to the type of mental health condition can
245 influence and act as a barrier to the type of help-seeking sought. When participants were asked
246 about a non-specified psychological condition, individuals were least likely to seek support from
247 friends/family. Friends/family were considered an initial source of help for all specified mental
248 health conditions apart from schizophrenia, where a psychologist or psychiatrist was preferred. Faith
249 healers, teachers, and guidance counsellors were regarded as a last option for specified
250 psychological conditions. Maloney et al. [25] reported that finding mental health conditions ‘too
251 personal/embarrassing’ or ‘not serious enough’ also posed a barrier to help-seeking.

252

253 Qualitative synthesis

254 Three articles reported qualitative evidence, consisting of 49 participants. One article (33%)
255 considered the experiences of military veterans and their families [29]. Another paper (33%)

256 explored individuals' beliefs and use of the supernatural in their own lived psychiatric experiences
257 [30]. The final article (33%) considered church leaders' views [31]. The quality of the qualitative
258 studies overall was good, with an average of four out of five criteria met.

259 Three themes were identified relating to the impact of mental health-related stigma and help-
260 seeking in the Caribbean: (i) Making sense of mental health conditions; (ii) Anticipated/Experienced
261 stigma-related experiences; and (iii) Individual characteristics. These themes are described below
262 alongside select illustrative quotations. Further participant quotations are provided in S5 File.

263 Making sense of mental health conditions

264 The first theme 'making sense of mental health conditions' has a focus on the language and meaning
265 individuals attached to mental health - their own and/or others, and its related conditions. Three
266 subthemes were identified in this process covering (a) labelling; (b) sociocultural factors; and (c) lack
267 of recognition/denial of one's own condition.

268 *Labelling*

269 This subtheme addresses the negative language attached to how individuals with mental health
270 conditions in the Caribbean are perceived and understood. Such individuals are commonly labelled
271 as *'crazy'* [29,30]. It is also implied that having a condition represents a permanent component of a
272 person's identity, *'once a psychotic, always a psychotic'* [30].

273 *Sociocultural factors*

274 Sociocultural factors, inclusive of cultural norms, religion and the belief of the supernatural, explored
275 the impact of individual's sociocultural beliefs and values on their attitudes and perceptions of
276 mental health. For example, the use of the bible and belief in 'witchcraft' was highlighted in
277 understanding mental health conditions, and individuals expressed they *'prayed to God to please*
278 *give me back my sanity'* [30] as a source of help-seeking.

279 *Lack of recognition/denial of one's own condition*

280 Individuals were identified as denying or not recognising their mental health needs due to stigma-
281 related factors. *'Sometimes there are people that are so closed up that they don't want...to say*
282 *anything' or 'don't see it at first glance'* [29]. This can lead to a reluctance to seek help, and an
283 inability to recognise a need for mental health support.

284 Anticipated/Experienced stigma-related experiences

285 The second theme, 'anticipated/experienced stigma-related experiences' captured responses that
286 were outcomes of the unfair treatment, prejudice, and negative connotations surrounding mental
287 health conditions, which acted as a barrier to help-seeking. This was showcased in three subthemes:
288 (a) social judgement, (b) discrimination, and (c) a lack of understanding.

289 *Social judgement*

290 This subtheme was showcased by the fear of, or experienced judgement/condemnation. The
291 anticipation of negative opinions of others was highlighted: *'came a Veteran and look - and came*
292 *back crazy'* [29]. Additionally, there was a perception that mental health conditions may be
293 identified as a 'sin' and be classed as 'shameful'.

294 *Discrimination*

295 Discrimination described the unjust bias and social rejection, including from employment and family,
296 that can lead to exclusion by experiencing a mental health condition. Fear of discrimination was
297 demonstrated in relation to employment, *'I want to get some job. I can't say that I am crazy…'* [29].
298 It was also expressed that those with a mental health condition, in this case substance abuse, would
299 *'lose family, they lose everything'* [31].

300 *Lack of understanding*

301 A lack of understanding of an individual's own perception and beliefs about their mental health
302 status can act as a barrier to help-seeking and lead to resistance and disagreements with care
303 providers. Participants belief in *'bless[ing] their house and get[ting] rid of negative energy'* [30] was

304 not understood and interpreted by doctors as hallucinating. Additionally, the involvement of the

305 *'spiritual aspect of life'* [30] in their experiences was felt to be disregarded by doctors.

306 Individual characteristics

307 The third theme 'individual characteristics' highlights how certain characteristics of a population that

308 can influence the stigma experienced and how this impacts help-seeking. One characteristic in

309 particular was noted – military personnel. The stigma surrounding mental health in military

310 personnel was highlighted, where veterans could be seen as they *'came back crazy from the army'*

311 [29]. Consequently, veterans reported to *'create their own support groups'* [29] for help-seeking.

312 Overall meta-synthesis

313 The results from the quantitative and qualitative syntheses have been triangulated to produce an

314 overall meta-synthesis. A conceptual model illustrating this is shown in Fig 2. Five of the six

315 subthemes identified in the qualitative synthesis were also captured in the quantitative data, with

316 the exception of the subtheme 'lack of understanding'. One factor identified in the quantitative

317 synthesis, but not in the qualitative synthesis, was the type of mental health condition and help-

318 seeking source.

319

320 **Fig 2. Conceptual model based on meta-synthesis of qualitative (*n* = 3) and quantitative (*n* = 6)**

321 **results.** Key: Boxes with solid lines represent themes and subthemes. Subthemes that are underlined

322 were identified in quantitative studies only. Subthemes that are asterisked were reported in

323 qualitative studies only. Subthemes that are neither asterisked or underlined were reported in

324 qualitative and quantitative studies. Dashed arrows indicate connections between the themes.

325 Factors within a dotted circle were identified as characteristics of a theme.

326 # Discussion

327 This is the first systematic review to examine the impact of mental health stigma on help-seeking in
328 the Caribbean. It illustrates a comprehensive overview of the existing evidence in this research area,
329 from both quantitative and qualitative perspectives, and the potential factors that underlie this
330 relationship.

331 Overall, the narrative synthesis of quantitative studies indicate that mental health stigma was
332 negatively associated with help-seeking, with the caveat that this association varies depending on
333 the type of mental health condition in question and types of help-seeking sources. The thematic
334 analysis of qualitative evidence identified three themes in relation to mental health stigma
335 impacting help-seeking: (i) Making sense of mental health conditions; (ii) Anticipated/Experienced
336 stigma-related experiences; and (iii) Individual characteristics. The conceptual model, derived from
337 the meta-synthesis, visually demonstrates the multifaceted relationship between mental health
338 stigma and help-seeking. The appraisal of the methodological quality of included studies suggests a
339 particular scarcity of existing high-quality quantitative studies.

340 The individual quantitative and qualitative syntheses allowed for a meta-synthesis to be conducted
341 which aided in addressing the aim of the study, to synthesise current evidence on the impact of
342 mental health stigma and help-seeking in the Caribbean. There were only nine papers, derived from
343 eight studies. and help-seeking, with the remaining four papers exploring stigma as a secondary
344 point of interest. This contributed to the identification of gaps in existing evidence where further
345 research is needed, which is discussed further in the discussion.

346 When exploring the subthemes that were identified in the qualitative synthesis, only one of the six
347 subthemes was not identified in the quantitative data (lack of understanding). Whilst no subthemes
348 were identified for the ‘Individual characteristics’ theme, ‘military personnel’ was highlighted as a
349 characteristic from the qualitative synthesis alone. A factor from the quantitative synthesis not

350 identified in the qualitative data was type of mental health condition and help-seeking source. This
351 lack of overlap in findings may be a culmination of the small number of studies included, diverse
352 populations explored, and the difference in the nature of research questions addressed in
353 quantitative and qualitative research. The lack of mixed methods research (MMR) evidence in this
354 review means a broader range of insights could not be captured.

355 This review also identified contradictory findings between studies. Jackson Williams [23] found that
356 Jamaican adolescents did not believe seeking help would benefit mental health symptoms, whereas
357 Maloney et al. [25] reported that most Jamaican adolescents thought digital mental health services
358 would provide relief to those with mental health symptoms. The latter study was conducted 8 years
359 after the former, which may suggest that young people's attitudes towards help-seeking are
360 changing. These findings also may infer that young people prefer to engage with e-health mental
361 health interventions, although research on this area currently has contradictory findings. Young
362 people often look for online mental health resources, a process that is influenced by an individual's
363 mental health literacy [32], reflecting the knowledge aspect of public stigma, demonstrating the
364 impact of stigma on help-seeking. Additionally, the anonymity that e-health services can provide can
365 reduce the risk of social stigma [33], supporting a two-way relationship between stigma and help-
366 seeking, as illustrated in this review's meta-synthesis.

367 Some of the factors identified in this review were only found in one study ('Lack of
368 recognition/denial of one's own condition', 'lack of understanding', and 'military personnel'
369 characteristic), however they remain key areas in the wider literature [11, 34-36] It is also important
370 to note the role of 'age' in the interplay between how mental health stigma impacts help-seeking.
371 This role has not been made explicit in the included studies to report on this, however age was
372 explored and found to impact help-seeking. There has been support that age influences the
373 relationship between stigma and help-seeking [37], although this role remains vague with conflicting
374 findings in the wider literature, suggesting a need for this to be explored in the Caribbean context.

Future research

The review identified gaps in the existing evidence and highlights future research needs. There is a dearth of research into this important topic in the Caribbean and a need for more evidence. The majority of studies in this review only focused on public stigma. Previous research has demonstrated that different types of stigma, such as self-stigma have a differential impact on help-seeking [38], thus there is a need for this to be further explored in the Caribbean context. As most research has looked at mental health as a whole, we need to know more about how stigma for different types of mental health conditions impacts different types of help-seeking. MMR would also allow for a richer understanding of this topic. Research is needed that targets the heterogeneous racial and ethnic groups that exist in the Caribbean, as well as groups under-represented in the literature and likely to be particularly impacted by stigma on help-seeking, such as military veterans and LGBTQ+ individuals. Higher quality research is also required, which will assist in overcoming some of the current methodological issues identified from the quality appraisal, such as recruiting representative samples, and using appropriate methodological measures and data collection methods.

Implications for policy and practice

This review can be utilised in the development of policy and practice. There is a need for interventions that involve community-based mental health education and health promotion to contribute to public awareness on mental health, stigma and help-seeking. This may help to challenge and change existing labelling and negative language, as well as prevent social judgement and discrimination. When taking into account the factors and themes identified in the meta-synthesis, this indicates a need for particular attention to the needs of different groups of individuals, e.g., military personnel [29], when considering help-seeking preferences, needs and barriers, and providing support to address these. For practitioners providing treatment, there is an essential need for cultural understanding to be able to optimally engage and support an individual with a mental health condition. The results also suggest a need for self-coping strategies and

400 teachings of ways to manage anticipated and/or experienced stigma to lessen the risk of this being a
401 barrier to help-seeking.

402 Limitations and strengths

403 This review restricted its selection criteria to including published, peer-reviewed papers, which may
404 have excluded relevant papers. However, this decision was made to be able to uphold the quality of
405 the review. Some of the included studies had small samples, thereby caution may be needed when
406 interpreting the findings of this review. Nonetheless, the findings from studies with lower participant
407 numbers did not drive any single conclusions drawn in this research but rather corroborated findings
408 from other studies, and by including all eligible studies regardless of sample size this review was able
409 to analyse and synthesise important and interesting data from the limited existing literature to
410 provide a thorough evaluation. Most of the included papers had many methodological issues, and
411 there were no MMR studies, which could provide richer insights. The small number of included
412 papers, limited Caribbean countries where the studies were set, and various target groups, restricts
413 the generalisability of the results to other Caribbean settings. Whilst Caribbean countries share
414 similarities, the Caribbean region is heterogenous. However, the findings from this review provide a
415 comprehensive overview of the currently available evidence, for which research can be built upon in
416 different Caribbean countries and contexts. The narrative synthesis, thematic analysis, and meta-
417 synthesis were all conducted by author J-BG, which may raise issues of bias. However, analyses were
418 reviewed by authors PCG and TTS to support the review's validity.

419 Conclusion

420 This systematic review provides a comprehensive overview of the existing quantitative and
421 qualitative evidence on the impact of mental health stigma on help-seeking in the Caribbean. The
422 conceptual model that was developed from the results syntheses can help to inform future research

423 and provide useful insight for policy and practice to prevent mental health stigma and subsequently

424 reduce the barrier this can serve to help-seeking.

425

426

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References

1. GBD 2019 Mental Disorders Collaborators. Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. Lancet Psychiatry. 2022 Feb 1;9(2):137–50. doi: 10.1016/S2215-0366(21)00395-3

2. Pan American Health Organization/World Health Organization. Report on the Assessment of Mental Health Systems in Latin America and the Caribbean using the World Health Organization

452 assessment instrument for mental health systems. 2013. Available from
453 https://www.mhinnovation.net/sites/default/files/downloads/innovation/reports/WHO-AIMS-
454 REPORT-on-mental-health-systems-in-latin-american-and-the-caribbean.pdf

455 3. Pan American Health Organization. Health Status of the Population - Mental health in the
456 Americas. 2017. Available from: https://www.paho.org/salud-en-las-americas-2017/ro-mental.html

457 4. Pan-American Life Insurance Group. Mental Health in Latin American: The Silent Pandemic.
458 2022 Apr. Available from:
459 https://www.palig.com/Media/Default/Documents/Mental%20Health%20White%20Paper%20PALIG
460 .pdf

461 5. Bradshaw Maynard DM. The history and current status of Psychology in Barbados: Research
462 and professional practice. Interamerican Journal of Psychology. 2013;47(2):227-238. Available from
463 https://www.redalyc.org/pdf/284/28430082007.pdf

464 6. Greenidge WLL. Help-Seeking Attitudes and Behaviors of English-Speaking Caribbean College
465 Students: A Review of the Literature and Implications for Clinical Practice. Vistas Online. 2016;58:1–
466 12. Available from: https://www.counseling.org/docs/default-
467 source/vistas/article_5858f227f16116603abcacff0000bee5e7.pdf?sfvrsn=4

468 7. Lacey KK, Sears KP, Crawford T V, Matusko N, Jackson JS. Relationship of social and economic
469 factors to mental disorders among population-based samples of Jamaicans and Guyanese. BMJ Open
470 [Internet]. 2016;6(12):1-9. doi: 10.1136/bmjopen-2016

471 8. Goffman E. Stigma: Notes on the Management of Spoiled Identity. New York: Simon &
472 Schuster; 1963.

473 9. Corrigan PW, Watson AC. Understanding the impact of stigma on people with. World
474 Psychiatry. 2002;1(1):16–20. Available from:
475 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1489832/pdf/wpa010016.pdf

476 10. Schnyder N, Panczak R, Groth N, Schultze-Lutter F. Association between mental health-
477 related stigma and active help-seeking: Systematic review and meta-analysis. The British Journal of
478 Psychiatry. 2017;210(4):261–268. doi: 10.1192/bjp.bp.116.189464

479 11. Clement S, Schauman O, Graham T, Maggioni F, Evans-Lacko S, Bezborodovs N, et al. What is
480 the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and
481 qualitative studies. Psychological Medicine. 2015; 45(1):11-27. doi: 10.1017/S0033291714000129

482 12. Coleman S, Stevelink SA, Denny JA, Hatch SL, Greenberg N. Stigma related barriers and
483 facilitators to help seeking for mental health issues in the Armed Forces: A systematic review and
484 thematic synthesis of qualitative literature. 2017; 47(11):1880–1892. doi:
485 10.1017/S0033291717000356

486 13. Mascayano F, Tapia T, Schilling S, Alvarado R, Tapia E, Lips W, et al. Stigma toward mental
487 illness in Latin America and the caribbean: A systematic review. Revista Brasileira de Psiquiatria.
488 2016; 38(1):73-85. doi: 10.1590/1516-4446-2015-1652

489 14. Gonzalez K. Impact of stigma on help-seeking behavior for mental disorders in Latin America
490 and the Caribbean: Scoping Review. M.Sc. Thesis, Umea University. 2016. Available from:
491 https://umu.diva-portal.org/smash/record.jsf?pid=diva2%3A945712&dswid=8625

492 15. Torres RM. Youth and Adult Education and Lifelong Learning in Latin America and the
493 Caribbean. In: Mayo P, editors. Learning with Adults. International Issues in Adult Education.
494 Rotterdam: Sense Publishers; 2013. pp. 19-31.

495 16. Thornicroft G, Sunkel C, Alikhon Aliev A, Baker S, Brohan E, el Chammay R, et al. The Lancet
496 Commission on ending stigma and discrimination in mental health. The Lancet. 2022;
497 400(10361):1438-1480. doi: 10.1016/S0140-6736(22)01470-2

498 17. Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan-a web and mobile app for
499 systematic reviews. Systematic Reviews. 2016 Dec 5;5(1):1-10. doi: 10.1186/s13643-016-0384-4

500 18. Hong QN, Fàbregues S, Bartlett G, Boardman F, Cargo M, Dagenais P, et al. The Mixed
501 Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers.
502 Education for Information. 2018;34(4):285-291. doi: 10.3233/EFI-180221

503 19. Oliver S, Harden A, Rees R, Shepherd J, Brunton G. An Emerging Framework for Including
504 Different Types of Evidence in Systematic Reviews for Public Policy. Evaluation. 2005;11(4): 428-446.
505 doi: 10.1177/1356389005059383

506 20. Popay J, Roberts H, Sowden A, Petticrew M, Arai L, Rodgers M, et al. Guidance on the
507 Conduct of Narrative Synthesis in Systematic Reviews A Product from the ESRC Methods
508 Programme. 2006. Available from: https://www.lancaster.ac.uk/media/lancaster-university/content-
509 assets/documents/fhm/dhr/chir/NSsynthesisguidanceVersion1-April2006.pdf

510 21. Ryan R, Cochrane Consumers and Communication Review Group. Cochrane Consumers and
511 Communication Review Group: data synthesis and analysis. Cochrane Consumers and
512 Communication Review Group. 2013 June. Available from:
513 https://cccrg.cochrane.org/sites/cccrg.cochrane.org/files/public/uploads/Analysis.pdf

514 22. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77–
515 101. doi: 10.1191/1478088706qp063oa

516 23. Jackson Williams D. Where do Jamaican Adolescents Turn for Psychological Help? Child
517 Youth Care Forum. 2012;41(5):461-477. doi: 10.1007/s10566-012-9177-7

518 24. Jackson Williams D. Help-Seeking Among Jamaican Adolescents: An Examination of
519 Individual Determinants of Psychological Help-Seeking Attitudes. Journal of Black Psychology.
520 2014;40(4):359-383. doi: 10.1177/0095798413488940

521 25. Maloney CA, Abel WD, McLeod HJ. Jamaican adolescents' receptiveness to digital mental
522 health services: A cross-sectional survey from rural and urban communities. Internet Interventions.
523 2020;21:1-9. doi: 10.1016/j.invent.2020.100325

524 26. Nohr L, Ruiz AL, Sandoval Ferrer JE, Buhlmann U. Mental health stigma and professional
525 help-seeking attitudes a comparison between Cuba and Germany. PLoS One. 2021 February
526 11;16(2):1-24. doi: 10.1371/journal.pone.0246501.

527 27. Ramkissoon AK, Donald C, Hutchinson G. Supernatural versus medical: Responses to mental
528 illness from undergraduate university students in Trinidad. International Journal of Social Psychiatry.
529 2017;63(4):330-338. doi: 10.1177/0020764017702412

530 28. Wagenaar BH, Kohrt BA, Hagaman AK, McLean KE, Kaiser BN. Determinants of care seeking
531 for mental health problems in rural haiti: Culture, cost, or competency. Psychiatric Services.
532 2013;64(4):366-372. doi: 10.1176/appi.ps.201200272

533 29. Hannold EM, Freytes IM, Uphold CR. Unmet health services needs experienced by puerto
534 rican OEF/OIF veterans and families post deployment. Military medicine. 2011;176(4): 381–388. doi:
535 10.7205/MILMED-D-10-00334

536 30. James CCAB, Carpenter KA, Peltzer K, Weaver S. Valuing psychiatric patients' stories: Belief
537 in and use of the supernatural in the Jamaican psychiatric setting. Transcultural Psychiatry.
538 2014;51(2):247-263. doi: 10.1177/1363461513503879

539 31. Liu S, Zafer M, Smart Y, Providence K, Katz CL. Knowledge of and Attitudes Toward
540 Alcoholism Among Church Leaders in Saint Vincent/Grenadines. International Journal of Mental
541 Health and Addiction. 2017;15(5):1081-1095. doi: 10.1007/s11469-017-9760-0

542 32. Pretorius C, McCashin D, Kavanagh N, Coyle D. Searching for Mental Health: A Mixed-
543 Methods Study of Young People's Online Help-seeking. Proceedings of the 2020 CHI Conference on
544 Human Factors in Computing Systems. 2020 April; 1-13. doi: 10.1145/3313831.3376328

545 33. Wies B, Landers C, Ienca M. Digital Mental Health for Young People: A Scoping Review of
546 Ethical Promises and Challenges. Frontiers in Digital Health. 2021;3(697072):1-11. doi:
547 10.3389/fdgth.2021.697072

548 34. Mantovani N, Pizzolati M, Edge D. Exploring the relationship between stigma and help-
549 seeking for mental illness in African-descended faith communities in the UK. Health Expectations.
550 2017;20(3):373-384. doi: 10.1111/hex.12464

551 35. Schomerus G, Stolzenburg S, Freitag S, Speerforck S, Janowitz D, Evans-Lacko S, et al. Stigma
552 as a barrier to recognizing personal mental illness and seeking help: a prospective study among
553 untreated persons with mental illness. European archives of psychiatry and clinical neuroscience.
554 2019;269(4):469–479. doi: 10.1007/s00406-018-0896-0

555 36. Randles R, Finnegan A. Veteran help-seeking behaviour for mental health issues: A
556 systematic review. BMJ Military Health. 2022;168(1):99–104. doi: 10.1136/bmjmilitary-2021-001903

557 37. Min JW. The Influence of Stigma and Views on Mental Health Treatment Effectiveness on
558 Service Use by Age and Ethnicity: Evidence From the CDC BRFSS 2007, 2009, and 2012. Sage Open.
559 2019;9(3):1-12. doi: 10.1177/2158244019876277

560 38. Pattyn E, Verhaeghe M, Sercu C, Bracke P. Public stigma and self-stigma: Differential
561 association with attitudes toward formal and informal help seeking. Psychiatric Services.
562 2014;65(2):232-238. doi: 10.1176/appi.ps.201200561

563

564
Supporting Information

565 **S1 Checklist – PRISMA Checklist**

566 **S1 Appendix – Search Strategies**

567 **S2 Appendix – Excluded Papers**

568 **S3 Appendix – Included Papers**

569 **S4 Appendix - Themes and subthemes with example participant quotations for included**

570 **qualitative studies**

571

572

573

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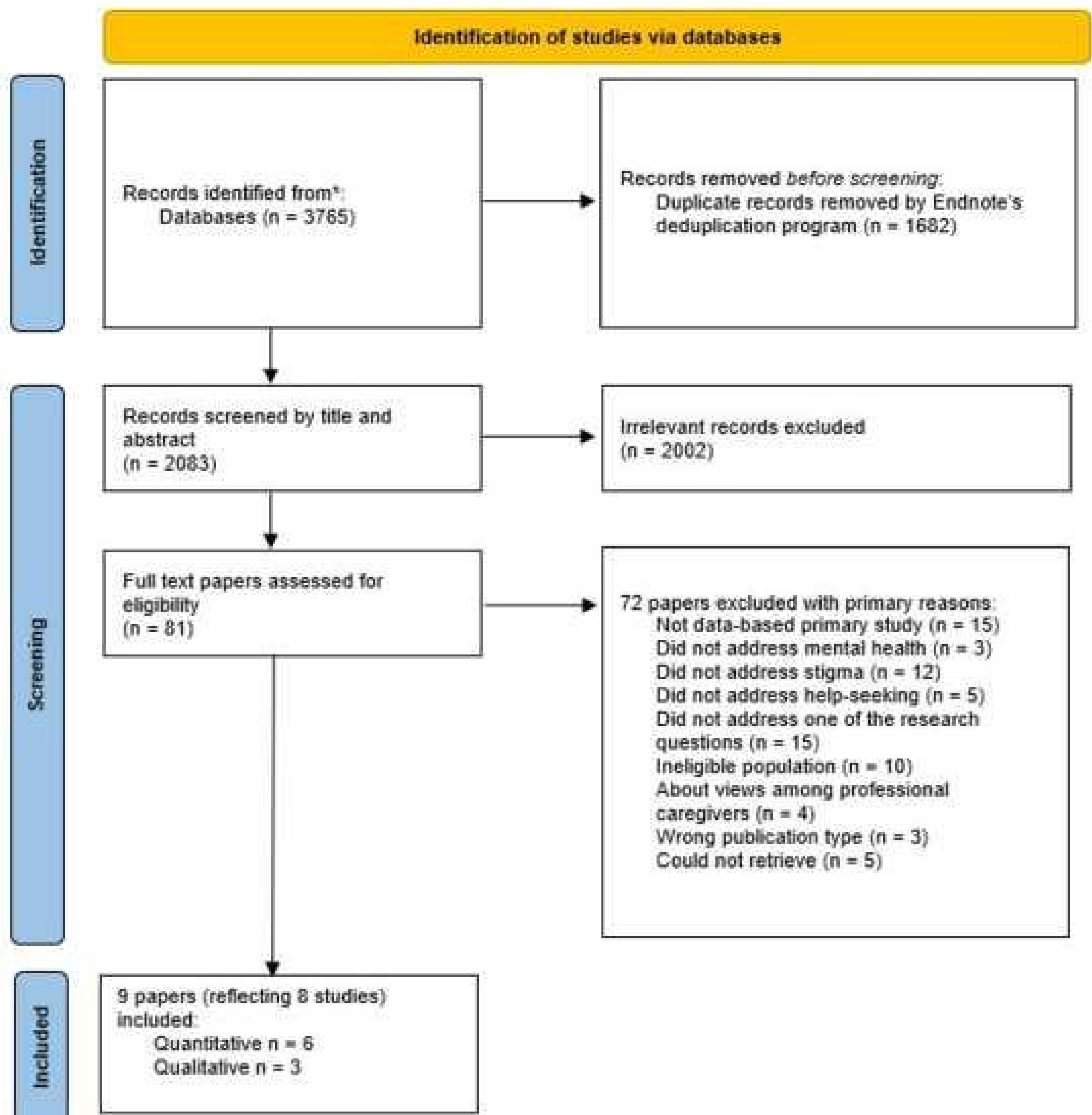

Fig 2

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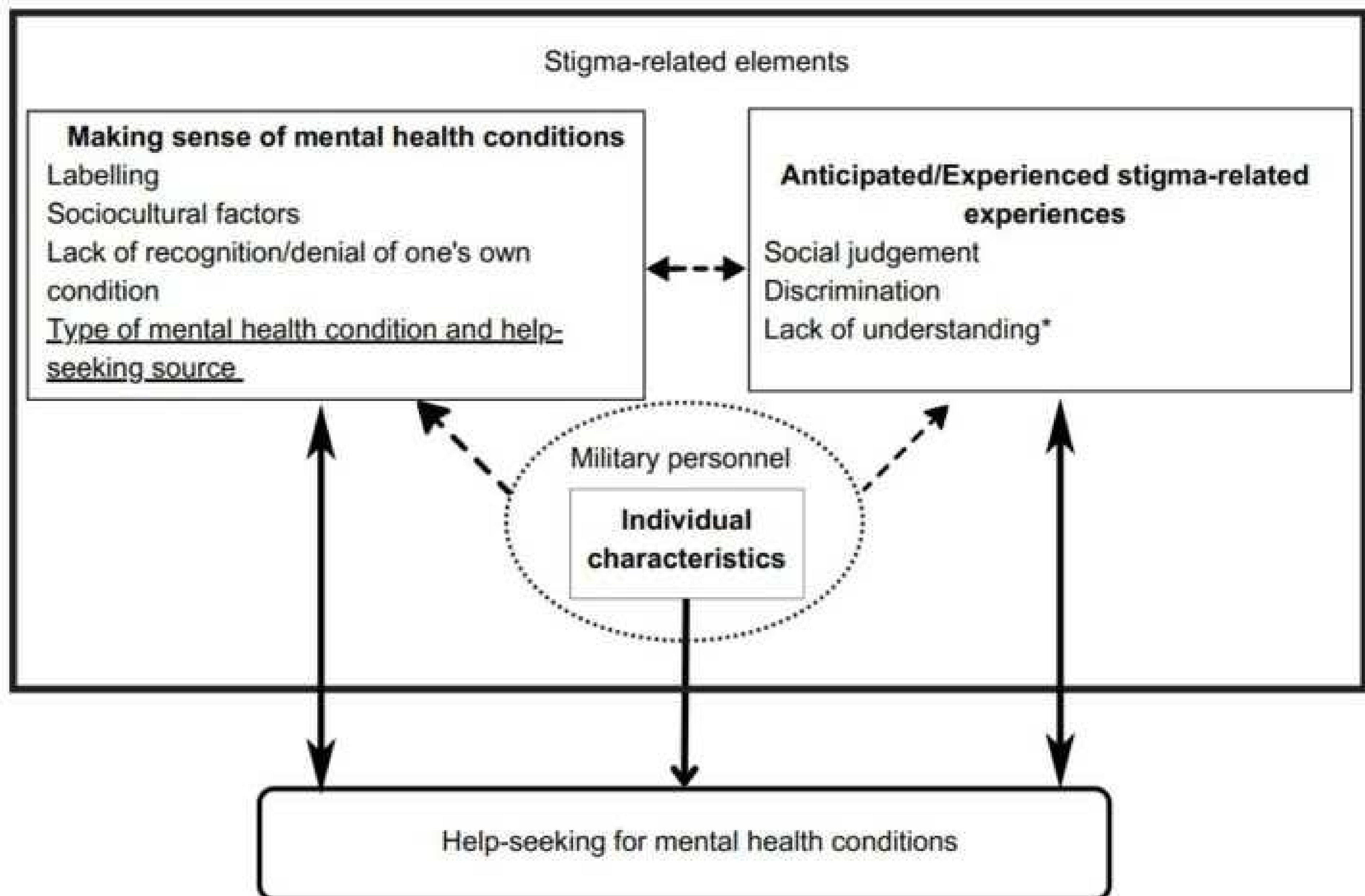

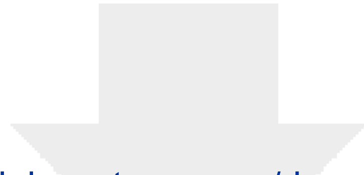

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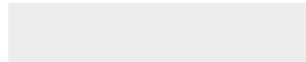
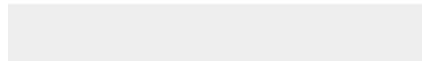
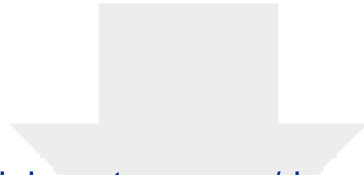




S1 Appendix Search Strategies



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Supporting Information

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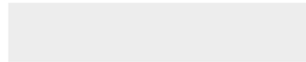
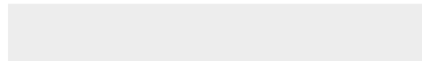
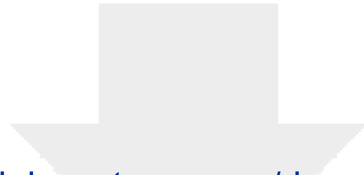




S2 Appendix Excluded References



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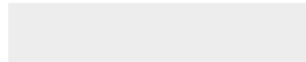
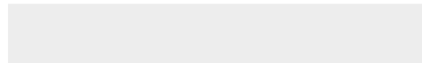
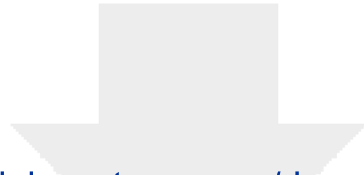




S3 Appendix Included Papers



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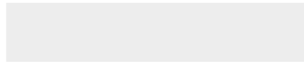
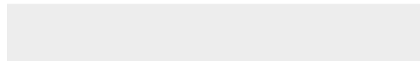
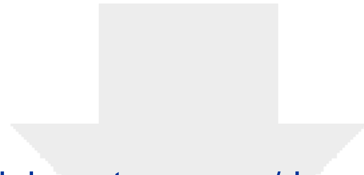




S4 Appendix Themes and subthemes with example participant quotations for included qualitative studies



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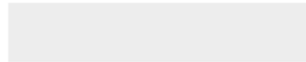

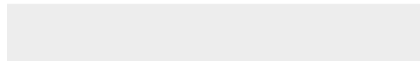

1 Impact of mental health stigma on help-seeking in the Caribbean: systematic
2 review

3 Mental health stigma and help-seeking

4

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23

Abstract

Background

Mental health conditions often go untreated, which can lead to long-term poor emotional, social physical health and behavioural outcomes, and in some cases, suicide. Mental health-related stigma is frequently noted as a barrier to help seeking, however no previous systematic review has considered evidence from the Caribbean specifically. This systematic review aimed to address two research questions: (1) What is the impact of mental health stigma on help-seeking in the Caribbean? (2) What factors underlie the relationship between stigma and help-seeking in the Caribbean?

Methods

A systematic search was conducted across six electronic databases (Medline, Embase, Global Health, PsychInfo, Scopus and LILACS). The search included articles published up to May 2022. Experts in the field were consulted to provide publication recommendations and references of included studies were checked. Data synthesis comprised of three components: a narrative synthesis of quantitative findings, a thematic analysis of qualitative findings, and a meta-synthesis combining these results.

Results

The review included nine articles (reflecting eight studies) totaling 1256 participants. A conceptual model was derived from the meta-synthesis, identifying three themes in relation to mental health stigma and help-seeking in the Caribbean: (i) Making sense of mental health conditions'; (ii) Anticipated/Experienced stigma-related experiences and (iii) Individual characteristics.

Conclusion

This review provides insights into the relationship between mental health stigma and help-seeking in the Caribbean based upon the current research evidence. This can be applied in the design of culturally appropriate future research, and to support policy~~,~~ and practice towards ~~, to target and decrease~~ stigma reduction, and improved mental care~~increase~~ help-seeking in the Caribbean.

49 ## Introduction

50 Mental health conditions are one of the leading causes of disability worldwide [1]. In the Caribbean,
51 increasing concerns over growing rates of mental health conditions have been identified [2]. There
52 are many contributory factors to this anticipated increase in prevalence, including an increasingly
53 aging population, and economic decline, which is linked to another major influence - the
54 consequences of the COVID-19 pandemic [3,4]. Traditionally in the Caribbean, poor mental health
55 and expressing emotions has broadly been culturally and socially stigmatised, associated with
56 shame, personal weakness, and a lack of commitment to God, which acts as a barrier to seeking
57 mental health support [5-7].

58 Goffman [8] defined *stigma* as the 'situation of the individual who is disqualified from full social
59 acceptance' (p9). Stigma can be a key contributor to the negative attitudes that surround mental
60 health [9]. Phrases such as "mental illness", "mental health problems" and "mentally ill", can carry
61 negative connotations and frame an individual's identity as a product of their condition. For this
62 reason, this paper will be using the terms "mental health" and "mental health conditions", although
63 it is understood that these phrases have been used interchangeably with other terminology.

64 Stigma can lead to the underutilization of mental health services, and has been identified as an
65 important barrier to help-seeking [10]. To date, three main systematic reviews [10-12] have explored
66 mental health-related stigma and help-seeking. All these reviews found that stigma had a clear and
67 negative impact on help-seeking. These reviews included studies primarily from the USA, Canada,
68 Europe or Australia and New Zealand. None of the reviews included studies in the Caribbean. This
69 may limit the generalisations that can be drawn to this region, as a systematic review by Mascayano
70 et al [13] identified there to be cultural nuances in mental health-related stigma in Latin America and
71 the Caribbean, differing from those identified in studies conducted in Western European countries.

72 There has only been one review that has had a focus on the impact of mental health stigma on help-
73 seeking in the Caribbean. A scoping review by Gonzalez [14] investigated the "Impact of stigma on
74 help-seeking behaviour for people with mental disorders in Latin America and the Caribbean". There
75 were 11 studies included, three of which were from the Caribbean. This review provided a useful
76 preliminary assessment of the relationship between mental health-related stigma and help-seeking
77 in these contexts, identifying stigma as a barrier to help-seeking. It is important to note that there
78 are cultural differences between Latin America and the Caribbean, so the conclusions drawn from
79 the Latin American studies may not be relevant to the Caribbean cultural context. There may also be
80 differences between Caribbean countries, as this region is highly heterogenous [15]. Thus, there is
81 scope and value in conducting an updated search and a comprehensive synthesis of the evidence in
82 the Caribbean context specifically through a systematic review.

83 This systematic review is the first to explore the impact of mental health stigma on help-seeking in
84 the Caribbean. This review aims to synthesise current evidence on the impact of mental health
85 stigma and help-seeking in the Caribbean. This will be addressed through two research questions:

86 (1) What is the impact of mental health stigma on help-seeking in the Caribbean?

87 (2) What factors underlie the relationship between mental health stigma and help-seeking in the
88 Caribbean?

89 Method

90 The review protocol was registered a-priori with PROSPERO (ID: CRD42022319634) and was
91 conducted in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses
92 (PRISMA) guidelines (see S1 Checklist).

Search strategy and selection of studies

Six electronic databases (Medline, Embase, Global Health, PsychInfo, Scopus and LILACS) were searched in May 2022. Subject headings and keywords were related to the Caribbean, mental health, and stigma (full list of search terms shown in S2 File). Help-seeking was not included as a subject heading with relevant keywords to not limit the amount of potentially relevant studies that may be generated from this initial search. Experts in the field were contacted to provide further publication recommendations, and reference lists of included papers were hand-searched by the main author (J-BG) for eligible papers not detected in the original search.

The inclusion criteria were full-text, data-based, peer-reviewed articles, of any study design (quantitative, qualitative or mixed methods), published up to May 2022 in English or Spanish (see Table 1). Studies were eligible for inclusion if they explored the relationship between mental health-related stigma and mental health-related help-seeking in individuals living in the Caribbean. All types of stigma were included in this review, and the definitions used are guided by the Lancet Commission's report on stigma and discrimination in mental health [16]. This includes: self-stigma, stigma by association, public stigma, and structural discrimination. This review includes all areas of help-seeking, including attitudes, intentions, and behaviours.

All results from this search were imported into Endnote20 (Clarivate Analytics), where deduplication was applied. The remaining studies were uploaded to Rayyan [17] for title and abstract screening. All titles and abstracts were screened by author J-BG. Authors KGD and CG independently screened a randomly selected 20% of the sample (10% each) for consistency, and to help ensure all relevant studies were included in the review. Discrepancies were resolved by discussion and arbitration, where any further clarification over the inclusion criteria was discussed and amendments appropriately made.

Full-text papers were obtained and assessed by author J-BG against the inclusion and exclusion criteria. Authors KGD and CG independently screened a randomly selected 10% sample

118 each. Discrepancies were resolved by discussion, and where necessary arbitration with another
119 author (PCG). There was uncertainty over one paper, where author PCG made the decision as to
120 whether it should be included. Author KGD assessed full papers published in Spanish for eligibility
121 solely due to the linguistic abilities of the team.

122

123

124

125

126 **Table 1**. **Inclusion and Exclusion Criteria.**

Participants		
	Include	Individuals living in the Caribbean
	Exclude	Persons help-seeking on behalf of another individual Professional caregivers Caribbeans that do not live in the Caribbean region
Stigma		
	Include	Any type of stigma relating to or associated with mental health conditions including: - Self stigma, also known as internalized stigma (when an individual applies negative views and attitudes towards themselves) - Stigma by association, also referred to as affiliate or courtesy stigma (experiencing disapproval or discrimination due to the association with stigmatized individuals) - Public stigma, which includes knowledge (misinformation), attitudes (prejudice) and behaviour (discrimination) - Structural stigma, also known as systematic or organisational stigma (inequities that result from laws, policies and practices)
	Exclude	Stigma relating to other social attributes Stigma relating to HIV/AIDS, cancer, sexual behaviour, abortion, epilepsy, leprosy or other situations not directly focusing on mental health
Help-Seeking		
	Include	Help-seeking for a mental health condition or any self-defined psychological, emotional or behavioural concern Measures of help-seeking-related attitudes, intentions and behaviours and relating to any stage of help-seeking from seeking initial informal help to service use
	Exclude	Help-seeking for reasons other than mental health-related concerns, e.g., intellectual disabilities, epilepsy, or dementia
Study Type		
	Include	Data-based, full-text, peer-reviewed articles Study designs that include any type of quantitative, qualitative or mixed method studies Articles published in English or Spanish Articles published up to May 2022
	Exclude	Non-data based or non-peer-reviewed articles, e.g., conference proceedings, revisions, research protocols, editorials, comments, letters, and dissertations or other 'grey literature'

127

128

129 ## Data extraction

130 Author J-BG extracted data from all included studies using a review-specific data extraction form
131 developed using Microsoft Excel. Data extracted from all study types included: author, year, title,
132 aim, country, study design, sample characteristics, type of mental health condition addressed,
133 aspect of stigma explored, aspect of help-seeking explored and key findings relating to the impact of
134 mental health-related stigma on help-seeking – extracted from both original data and author's
135 reflections from the results section only, unless results and discussion sections were combined. For
136 quantitative studies, the measures of stigma and help-seeking used were also extracted. For
137 qualitative studies, the method of data collection and analysis, and relevant data extracts and
138 authors comments were recorded. Author KGD independently extracted data from two randomly
139 selected papers of each design type for consistency. The independently extracted results were
140 compared, and any discrepancies were discussed and resolved. It was established that consistency in
141 extraction had been achieved, following which data extraction for the remaining papers were
142 conducted by author J-BG only.

143 ## Quality appraisal

144 Author J-BG conducted a quality assessment of all included studies using the Mixed Methods
145 Appraisal Tool (MMAT) [18]. Five quality criteria are listed for each study design (e.g., Is the sample
146 representative of the target population? Are the findings adequately derived from the data?), where
147 responses are 'Yes', 'No' and 'Can't tell'. Following the guidance from Hong et al. [18], rather than
148 calculating an overall score for each paper, a more detailed presentation of the ratings of each
149 criterion was constructed to appraise the quality. Authors J-BG and KGD independently assessed the
150 same two quantitative and qualitative papers to determine consistency, after which the remaining
151 papers were appraised by author J-BG alone.

Data synthesis

Data synthesis was conducted in three stages. Following guidance from the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre; [19], quantitative and qualitative research evidence were considered independently before merging.

First, a narrative synthesis [20] was conducted on findings from quantitative evidence. A preliminary synthesis was developed, providing an initial description of the results of the included studies. The relationship between mental health-related stigma and help-seeking within and between studies was explored, with continuous reference to the extracted data, to help identify factors that influence this relationship. Lastly, the robustness of the synthesis was assessed. This was achieved by appraising the methodological quality of the included studies using the MMAT, and how the evidence was synthesised [21]. A textual narrative is provided in the results.

The second stage involved a thematic analysis [22] conducted on findings from qualitative evidence. Extracted data was input into the qualitative analysis software NVivo (Release 1.7.1). Initial codes were generated to develop a codebook by author J-BG, which continued to be revised when appropriate after the coding of each paper. Codes were then clustered into groups to explore meanings, interconnections, and patterns. This led to the development of initial themes, refinement of main themes and subthemes, which were reviewed by authors PCG and TTS, to then be structured into a thematic map.

Lastly, the data underwent a process of triangulation through a thematic meta-synthesis~~, was conducted,~~ where the findings from the quantitative and qualitative syntheses were integrated. This involved two stages. First, the quantitative-based synthesis papers were re-reviewed to see which factors were also present in the qualitative evidence. Next, it was determined whether any relevant factors were identified in the quantitative papers that did not arise from the qualitative papers, and vice versa. The thematic map developed from the qualitative synthesis was extended to reflect findings from the quantitative synthesis.

177 # Results

178 The initial database search returned 3,765 potentially relevant papers (see Fig. 1). Excluded as
179 duplicates were 1,682 papers. A further 2,002 papers were excluded as ineligible under the review
180 criteria. The remaining 81 papers were full-text assessed (details of the papers excluded at full-text
181 stage are described in S3 File). Nine papers met the review inclusion criteria. No additional results
182 were obtained through contacting experts or searching through reference lists. A summary of the
183 included papers is provided in Table 2, with full details described in S4 File.

184

185 **Fig 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow**
186 **diagram .**

187

188 **Table 2. Summary of included papers.**

189

Author	Country	Study Design	Sample Characteristics	Aspect of Stigma	Aspect of Help-Seeking	Key findings
Quantitative Papers						
Jackson Williams [23]	Jamaica	Cross-sectional survey	146 male and 193 female adolescents	Public Stigma, Perceived Stigma	Attitudes	"…for a 'psychological problem'…results indicate that students would seek help first from a medical doctor, followed by a faith healer and then from their teacher. Friends and family members were the last source of help…Across all disorders, with the exception of schizophrenia, students consistently identified friends and family members as their first choice of help. For schizophrenia, students reported that they would seek help from a psychologist/ psychiatrist first" (p467, 469)
Jackson Williams [24]	Jamaica	Cross-sectional survey	146 male and 193 female adolescents	Public Stigma	Attitudes	"results indicate that more negative opinions about mental illness, or more authoritarian and socially restrictive opinions, as well as less benevolent opinions were associated with less positive psychological help-seeking attitudes" (p371)
Maloney et al. [25]	Jamaica	Cross-sectional survey	Survey 1 - 107 adolescents Survey 2 – 56 of the 107 adolescents from Survey 1	Public Stigma	Attitudes	"When asked to indicate barriers to seeking mental health care, respondents most frequently reported the problem was too personal/embarrassing...or not serious enough" (p4)
Nohr et al. [26]	Cuba	Cross-sectional survey	136 female and 59 male adults	Public Stigma	Attitudes	"community attitudes were a significant predictor of help-seeking attitudes" (p8)
Ramkissoon et al. [27]	Trinidad	Cross-sectional survey	136 female and 22 male university students	Public Stigma	Behaviours	"Significant associations existed between perceiving mental illness to be caused by supernatural factors, seeking religious/spiritual intervention... and seeking religious/spiritual intervention as the first in the health-seeking pathway" (p332)
Wagenaar et al. [28]	Haiti	Cross-sectional survey	408 adults	Public Stigma, Cultural Stigma	Intentions	"Persons who stated that suffering from mental distress is never an individual's fault were 3.5 times as likely as others to respond that they would turn to God first over hospitals or clinics and were .4 times as likely to respond that they would go to other community-based providers first compared with hospitals or clinics. Individuals responding that disasters can cause mental distress were 2.8 times as likely to respond that they would turn to God over hospitals or clinics." (p368-369)

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Qualitative Papers						
Hannold et al. [29]	Puerto Rico	Semi-structured interview	8 veterans and 8 family members	Public Stigma	Attitudes	"Veterans may deny the need for psychological treatment because of stigma surrounding mental illness…FMs (family members) also perceived the stigma of mental illness to be real and problematic." (p385)
James et al. [30]	Jamaica	Semi-structured interview	3 case studies (24 years old, female, paranoid schizophrenia; 45 years old, female, bipolar; 19 years old, male, schizophrenia)	Public Stigma, Cultural Stigma	Behaviours	"The effects of the supernatural as the main cause of illness was a pervasive theme throughout the interviews. This in turn influenced the treatment that the individuals requested." (p259)
Liu et al. [31]	Saint Vincent and the Grenadines	Semi-structured interview	30 church leaders	Public Stigma	Attitudes	"Those who had drinking problems tended to stray from and avoid the church, largely out of fear of condemnation: 'There are some sins members wouldn't want to confess because it's too shameful. Alcoholism is one of those issues.' " (p1086)

190

191

192 All included papers were published between 2011 and 2021, and were written in English. The
193 number of participants ranged from three to 408 subjects. Two papers used data from the same
194 study [23,24]. Studies were conducted in Jamaica (37.5%, n=3), Trinidad (12.5%, n=1), Haiti (12.5%,
195 n=1), Cuba (12.5%, n=1), Puerto Rico (12.5%, n=1), and St Vincent and the Grenadines (12.5%,
196 n=1). Six (66%) papers reported quantitative data, and three papers (33%) reported qualitative data.
197 Five papers (55%) had a main focus on both stigma and help-seeking. Three of the five papers
198 explored public stigma and help-seeking attitudes, one focused on public stigma and help-seeking
199 behaviours, and one on both public and cultural stigma and help-seeking behaviours. The remaining
200 four papers (44%) focused on help-seeking attitudes and intentions, where stigma was an element of
201 the study. In only one paper (11%), did all participants have experience of mental health difficulties.
202 Four papers (44%) did not specify a mental health condition, but instead focused on mental
203 health/mental health conditions as a whole. Specific conditions were explored across the remaining
204 5 articles (55%): depression, anxiety, schizophrenia, attention deficit/hyperactivity disorder-
205 combined type (ADHD), conduct disorder, eating disorder not otherwise specified, substance abuse,
206 bipolar disorder, and alcoholism.

207 The overall methodological quality of the included papers was moderate, with the quantitative
208 papers being of poorer standard. One qualitative paper (11%) satisfied all five MMAT criteria, one
209 (11%) satisfied four criteria, and the other (11%) satisfying three criteria, with issues relating to the
210 appropriateness of the qualitative approach, data collection methods, and how findings were
211 derived from the data. Three quantitative papers (33%) satisfied three out of five criteria, and the
212 remaining three papers (33%) met two out of five criteria. This was mostly due to issues concerning
213 sample representativeness, appropriateness of methods, and a lack of reporting on response rates.
214 An overview of the quality appraisal of the quantitative and qualitative papers is presented in Table
215 3.

216

217 **Table 3. Overview of the quality of included quantitative and qualitative papers.**

218 Quality Appraisal Checklist item* (Y=yes, criteria met; N=no, criteria not met; ?=can't tell)

219

	1)	2)	3)	4)	5)	Number of criteria met
Quantitative Papers						
Jackson Williams [23]	Y	n	n	?	y	2/5
Jackson Williams [24]	Y	n	y	?	y	3/5
Maloney et al. [25]	Y	n	n	n	y	2/5
Nohr et al. [26]	Y	n	y	?	y	3/5
Ramkissoon et al. [27]	N	n	y	y	y	3/5
Wagenaar et al. [28]	Y	?	n	?	y	2/5
Qualitative Papers						
Hannold et al. [29]	Y	n	y	y	y	4/5
James et al. [30]	Y	y	y	y	y	5/5
Liu et al. [31]	?	y	?	y	y	3/5

Quantitative Criteria: 1) Is the sampling strategy relevant to address the research question? 2) Is the sample representative of the target population? 3) Are the measurements appropriate? 4) Is the risk of nonresponse bias low? 5) Is the statistical analysis appropriate to answer the research question?

Qualitative Criteria: 1) Is the qualitative approach appropriate to answer the research question? 2) Are the qualitative data collection methods adequate to address the research question? 3) Are the findings adequately derived from the data? 4) Is the interpretation of results sufficiently substantiated by data? 5) Is there coherence between qualitative data sources, collection, analysis and interpretation?

220

221

222 ## Quantitative synthesis

223 Six papers reported quantitative evidence, captured from 1,207 participants. All studies were cross-
224 sectional self-completed surveys. The quality of the quantitative papers overall was average to
225 below average, meeting two to three out of five criteria. The narrative synthesis of these data is
226 presented in terms of: Associations between stigma and help-seeking and Stigma-related barriers to
227 help-seeking.

228 ### Associations between stigma and help-seeking

229 Four papers reported an association between stigma and help-seeking, including data from 1100
230 participants. Two studies (50%) were conducted with the general population [26,28]. The remaining
231 two studies were conducted on adolescents [24] and university students [27].

232 Summarising the statistically significant findings, negative community attitudes significantly predict
233 negative help-seeking attitudes [26]. Opinions of mental health conditions that were authoritarian,
234 socially restrictive, or less benevolent, reflecting the attitudes aspect of public stigma, were
235 associated with greater negative attitudes towards professional help-seeking [24]. A belief that the
236 cause of mental health conditions is not the fault of the individual, reflecting the attitudes aspect of
237 public stigma, led to a greater likelihood of seeking care from religious sources compared to
238 hospitals or clinics [28]. Similarly, attributing the cause of mental health conditions to supernatural
239 or medical causes, reflecting knowledge and attitudes aspects of public stigma were both associated
240 with a willingness to seek help from both religious and medical sources [27].

241 Stigma-related barriers to help-seeking

242 Two papers reported data on the stigma-related barriers to help-seeking [23,25] including data from
243 446 participants. Both studies were conducted on adolescents.

244 Jackson Williams [23] found that the stigma attached to the type of mental health condition can
245 influence and act as a barrier to the type of help-seeking sought. When participants were asked
246 about a non-specified psychological condition, individuals were least likely to seek support from
247 friends/family. Friends/family were considered an initial source of help for all specified mental
248 health conditions apart from schizophrenia, where a psychologist or psychiatrist was preferred. Faith
249 healers, teachers, and guidance counsellors were regarded as a last option for specified
250 psychological conditions. Maloney et al. [25] reported that finding mental health conditions 'too
251 personal/embarrassing' or 'not serious enough' also posed a barrier to help-seeking.

252

253 Qualitative synthesis

254 Three articles reported qualitative evidence, consisting of 49 participants. One article (33%)
255 considered the experiences of military veterans and their families [29]. Another paper (33%)

256 explored individuals' beliefs and use of the supernatural in their own lived psychiatric experiences
257 [30]. The final article (33%) considered church leaders' views [31]. The quality of the qualitative
258 studies overall was good, with an average of four out of five criteria met.

259 Three themes were identified relating to the impact of mental health-related stigma and help-
260 seeking in the Caribbean: (i) Making sense of mental health conditions; (ii) Anticipated/Experienced
261 stigma-related experiences; and (iii) Individual characteristics. These themes are described below
262 alongside select illustrative quotations. Further participant quotations are provided in S5 File.

263 Making sense of mental health conditions

264 The first theme 'making sense of mental health conditions' has a focus on the language and meaning
265 individuals attached to mental health - their own and/or others, and its related conditions. Three
266 subthemes were identified in this process covering (a) labelling; (b) sociocultural factors; and (c) lack
267 of recognition/denial of one's own condition.

268 *Labelling*

269 This subtheme addresses the negative language attached to how individuals with mental health
270 conditions in the Caribbean are perceived and understood. Such individuals are commonly labelled
271 as *'crazy'* [29,30]. It is also implied that having a condition represents a permanent component of a
272 person's identity, *'once a psychotic, always a psychotic'* [30].

273 *Sociocultural factors*

274 Sociocultural factors, inclusive of cultural norms, religion and the belief of the supernatural, explored
275 the impact of individual's sociocultural beliefs and values on their attitudes and perceptions of
276 mental health. For example, the use of the bible and belief in 'witchcraft' was highlighted in
277 understanding mental health conditions, and individuals expressed they *'prayed to God to please*
278 *give me back my sanity'* [30] as a source of help-seeking.

279 *Lack of recognition/denial of one's own condition*

280 Individuals were identified as denying or not recognising their mental health needs due to stigma-
281 related factors. *'Sometimes there are people that are so closed up that they don't want...to say*
282 *anything' or 'don't see it at first glance'* [29]. This can lead to a reluctance to seek help, and an
283 inability to recognise a need for mental health support.

284 Anticipated/Experienced stigma-related experiences

285 The second theme, 'anticipated/experienced stigma-related experiences' captured responses that
286 were outcomes of the unfair treatment, prejudice, and negative connotations surrounding mental
287 health conditions, which acted as a barrier to help-seeking. This was showcased in three subthemes:
288 (a) social judgement, (b) discrimination, and (c) a lack of understanding.

289 *Social judgement*

290 This subtheme was showcased by the fear of, or experienced judgement/condemnation. The
291 anticipation of negative opinions of others was highlighted: *'came a Veteran and look - and came*
292 *back crazy'* [29]. Additionally, there was a perception that mental health conditions may be
293 identified as a 'sin' and be classed as 'shameful'.

294 *Discrimination*

295 Discrimination described the unjust bias and social rejection, including from employment and family,
296 that can lead to exclusion by experiencing a mental health condition. Fear of discrimination was
297 demonstrated in relation to employment, *'I want to get some job. I can't say that I am crazy…'* [29].
298 It was also expressed that those with a mental health condition, in this case substance abuse, would
299 *'lose family, they lose everything'* [31].

300 *Lack of understanding*

301 A lack of understanding of an individual's own perception and beliefs about their mental health
302 status can act as a barrier to help-seeking and lead to resistance and disagreements with care
303 providers. Participants belief in *'bless[ing] their house and get[ting] rid of negative energy'* [30] was

not understood and interpreted by doctors as hallucinating. Additionally, the involvement of the *'spiritual aspect of life'* [30] in their experiences was felt to be disregarded by doctors.

Individual characteristics

The third theme 'individual characteristics' highlights how certain characteristics of a population that can influence the stigma experienced and how this impacts help-seeking. One characteristic in particular was noted – military personnel. The stigma surrounding mental health in military personnel was highlighted, where veterans could be seen as they *'came back crazy from the army'* [29]. Consequently, veterans reported to *'create their own support groups'* [29] for help-seeking.

Overall meta-synthesis

~~Combined into a meta-synthesis are t~~The results from the quantitative and qualitative syntheses have been triangulated to produce an overall meta-synthesis. A conceptual model illustrating this is shown in Fig 2. Five of the six subthemes identified in the qualitative synthesis were also captured in the quantitative data, with the exception of the subtheme 'lack of understanding'. One factor identified in the quantitative synthesis, but not in the qualitative synthesis, was the type of mental health condition and help-seeking source.

Fig 2. Conceptual model based on meta-synthesis of qualitative (*n* = 3) and quantitative (*n* = 6) results. Key: Boxes with solid lines represent themes and subthemes. Subthemes that are underlined were identified in quantitative studies only. Subthemes that are asterisked were reported in qualitative studies only. Subthemes that are neither asterisked or underlined were reported in qualitative and quantitative studies. Dashed arrows indicate connections between the themes. Factors within a dotted circle were identified as characteristics of a theme.

326 ## Discussion

327 This is the first systematic review to examine the impact of mental health stigma on help-seeking in
328 the Caribbean. It illustrates a comprehensive overview of the existing evidence in this research area,
329 from both quantitative and qualitative perspectives, and the potential factors that underlie this
330 relationship.

331 Overall, the narrative synthesis of quantitative studies indicate that mental health stigma was
332 negatively associated with help-seeking, with the caveat that this association varies depending on
333 the type of mental health condition in question and types of help-seeking sources. The thematic
334 analysis of qualitative evidence identified three themes in relation to mental health stigma
335 impacting help-seeking: (i) Making sense of mental health conditions; (ii) Anticipated/Experienced
336 stigma-related experiences; and (iii) Individual characteristics. The conceptual model, derived from
337 the meta-synthesis, visually demonstrates the multifaceted relationship between mental health
338 stigma and help-seeking. The appraisal of the methodological quality of included studies suggests a
339 particular scarcity of existing high-quality quantitative studies.

340 The individual quantitative and qualitative syntheses allowed for a meta-synthesis to be conducted
341 which aided in addressing the aim of the study, to synthesise current evidence on the impact of
342 mental health stigma and help-seeking in the Caribbean. There were only nine papers, derived from
343 eight studies. and help-seeking, with the remaining four papers exploring stigma as a secondary
344 point of interest. This contributed to the identification of gaps in existing evidence where further
345 research is needed, which is discussed further in the discussion.

346 When exploring the subthemes that were identified in the qualitative synthesis, only one of the six
347 subthemes was not identified in the quantitative data (lack of understanding). Whilst no subthemes
348 were identified for the 'Individual characteristics' theme, 'military personnel' was highlighted as a
349 characteristic from the qualitative synthesis alone. A factor from the quantitative synthesis not

350 identified in the qualitative data was type of mental health condition and help-seeking source. This
351 lack of overlap in findings may be a culmination of the small number of studies included, diverse
352 populations explored, and the difference in the nature of research questions addressed in
353 quantitative and qualitative research. The lack of mixed methods research (MMR) evidence in this
354 review means a broader range of insights could not be captured.

355 This review also identified contradictory findings between studies. Jackson Williams [23] found that
356 Jamaican adolescents did not believe seeking help would benefit mental health symptoms, whereas
357 Maloney et al. [25] reported that most Jamaican adolescents thought digital mental health services
358 would provide relief to those with mental health symptoms. The latter study was conducted 8 years
359 after the former, which may suggest that young people's attitudes towards help-seeking are
360 changing. These findings also may infer that young people prefer to engage with e-health mental
361 health interventions, although research on this area currently has contradictory findings. Young
362 people often look for online mental health resources, a process that is influenced by an individual's
363 mental health literacy [32], reflecting the knowledge aspect of public stigma, demonstrating the
364 impact of stigma on help-seeking. Additionally, the anonymity that e-health services can provide can
365 reduce the risk of social stigma [33], supporting a two-way relationship between stigma and help-
366 seeking, as illustrated in this review's meta-synthesis.

367 Some of the factors identified in this review were only found in one study ('Lack of
368 recognition/denial of one's own condition', 'lack of understanding', and 'military personnel'
369 characteristic), however they remain key areas in the wider literature [11, 34-36] It is also important
370 to note the role of 'age' in the interplay between how mental health stigma impacts help-seeking.
371 This role has not been made explicit in the included studies to report on this, however age was
372 explored and found to impact help-seeking. There has been support that age influences the
373 relationship between stigma and help-seeking [37], although this role remains vague with conflicting
374 findings in the wider literature, suggesting a need for this to be explored in the Caribbean context.

Future research

The review identified gaps in the existing evidence and highlights future research needs. There is a dearth of research into this important topic in the Caribbean and a need for more evidence. The majority of studies in this review only focused on public stigma. Previous research has demonstrated that different types of stigma, such as self-stigma have a differential impact on help-seeking [38], thus there is a need for this to be further explored in the Caribbean context. As most research has looked at mental health as a whole, we need to know more about how stigma for different types of mental health conditions impacts different types of help-seeking. MMR would also allow for a richer understanding of this topic. Research is needed that targets the heterogeneous racial and ethnic groups that exist in the Caribbean, as well as groups under-represented in the literature and likely to be particularly impacted by stigma on help-seeking, such as military veterans and LGBTQ+ individuals. Higher quality research is also required, which will assist in overcoming some of the current methodological issues identified from the quality appraisal, such as recruiting representative samples, and using appropriate methodological measures and data collection methods.

Implications for policy and practice

This review can be utilised in the development of policy and practice. There is a need for interventions that involve community-based mental health education and health promotion to contribute to public awareness on mental health, stigma and help-seeking.~~to incorporate mental health knowledge into early education and public awareness that includes stigma-reducing strategies.~~ This may help to challenge and change existing labelling and negative language, as well as prevent social judgement and discrimination. When taking into account the factors and themes identified in the meta-synthesis, this indicates a need for particular attention to the needs of different groups of individuals, e.g., military personnel [29], when considering help-seeking preferences, needs and barriers, and providing support to address these. For practitioners providing treatment, there is an essential need for cultural understanding to be able to optimally engage and

400 support an individual with a mental health condition. The results also suggest a need for self-coping
401 strategies and teachings of ways to manage anticipated and/or experienced stigma to lessen the risk
402 of this being a barrier to help-seeking.

403 Limitations and strengths

404 This review restricted its selection criteria to including published, peer-reviewed papers, which may
405 have excluded relevant papers. However, this decision was made to be able to uphold the quality of
406 the review. Some of the included studies had small samples, thereby caution may be needed when
407 interpreting the findings of this review. Nonetheless, the findings from studies with lower participant
408 numbers did not drive any single conclusions drawn in this research but rather corroborated findings
409 from other studies, and by including all eligible studies regardless of sample size this review was able
410 to analyse and synthesise important and interesting data from the limited existing literature to
411 provide a thorough evaluation. Most of the included papers had many methodological issues, and
412 there were no MMR studies, which could provide richer insights. The small number of included
413 papers, limited Caribbean countries where the studies were set, and various target groups, restricts
414 the generalisability of the results to other Caribbean settings. Whilst Caribbean countries share
415 similarities, the Caribbean region is heterogenous. However, the findings from this review provide a
416 comprehensive overview of the currently available evidence, for which research can be built upon in
417 different Caribbean countries and contexts. The narrative synthesis, thematic analysis, and meta-
418 synthesis were all conducted by author J-BG, which may raise issues of bias. However, analyses were
419 reviewed by authors PCG and TTS to support the review's validity.

420 Conclusion

421 This systematic review provides a comprehensive overview of the existing quantitative and
422 qualitative evidence on the impact of mental health stigma on help-seeking in the Caribbean. The
423 conceptual model that was developed from the results syntheses can help to inform future research

424 and provide useful insight for policy and practice to prevent mental health stigma and subsequently

425 reduce the barrier this can serve to help-seeking.

426

427

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440 stated instead) to any Author Accepted Manuscript version arising.

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445

446 ## References

447 1. GBD 2019 Mental Disorders Collaborators. Global, regional, and national burden of 12
448 mental disorders in 204 countries and territories, 1990–2019: a systematic analysis for the Global
449 Burden of Disease Study 2019. Lancet Psychiatry. 2022 Feb 1;9(2):137–50. doi: 10.1016/S2215-
450 0366(21)00395-3

451 2. Pan American Health Organization/World Health Organization. Report on the Assessment of
452 Mental Health Systems in Latin America and the Caribbean using the World Health Organization

453 assessment instrument for mental health systems. 2013. Available from
454 https://www.mhinnovation.net/sites/default/files/downloads/innovation/reports/WHO-AIMS-
455 REPORT-on-mental-health-systems-in-latin-american-and-the-caribbean.pdf

456 3. Pan American Health Organization. Health Status of the Population - Mental health in the
457 Americas. 2017. Available from: https://www.paho.org/salud-en-las-americas-2017/ro-mental.html

458 4. Pan-American Life Insurance Group. Mental Health in Latin American: The Silent Pandemic.
459 2022 Apr. Available from:
460 https://www.palig.com/Media/Default/Documents/Mental%20Health%20White%20Paper%20PALIG
461 .pdf

462 5. Bradshaw Maynard DM. The history and current status of Psychology in Barbados: Research
463 and professional practice. Interamerican Journal of Psychology. 2013;47(2):227-238. Available from
464 https://www.redalyc.org/pdf/284/28430082007.pdf

465 6. Greenidge WLL. Help-Seeking Attitudes and Behaviors of English-Speaking Caribbean College
466 Students: A Review of the Literature and Implications for Clinical Practice. Vistas Online. 2016;58:1–
467 12. Available from: https://www.counseling.org/docs/default-
468 source/vistas/article_5858f227f16116603abcacff0000bee5e7.pdf?sfvrsn=4

469 7. Lacey KK, Sears KP, Crawford T V, Matusko N, Jackson JS. Relationship of social and economic
470 factors to mental disorders among population-based samples of Jamaicans and Guyanese. BMJ Open
471 [Internet]. 2016;6(12):1-9. doi: 10.1136/bmjopen-2016

472 8. Goffman E. Stigma: Notes on the Management of Spoiled Identity. New York: Simon &
473 Schuster; 1963.

474 9. Corrigan PW, Watson AC. Understanding the impact of stigma on people with. World
475 Psychiatry. 2002;1(1):16–20. Available from:
476 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1489832/pdf/wpa010016.pdf

477 10. Schnyder N, Panczak R, Groth N, Schultze-Lutter F. Association between mental health-
478 related stigma and active help-seeking: Systematic review and meta-analysis. The British Journal of
479 Psychiatry. 2017;210(4):261–268. doi: 10.1192/bjp.bp.116.189464

480 11. Clement S, Schauman O, Graham T, Maggioni F, Evans-Lacko S, Bezborodovs N, et al. What is
481 the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and
482 qualitative studies. Psychological Medicine. 2015; 45(1):11-27. doi: 10.1017/S0033291714000129

483 12. Coleman S, Stevelink SA, Denny JA, Hatch SL, Greenberg N. Stigma related barriers and
484 facilitators to help seeking for mental health issues in the Armed Forces: A systematic review and
485 thematic synthesis of qualitative literature. 2017; 47(11):1880–1892. doi:
486 10.1017/S0033291717000356

487 13. Mascayano F, Tapia T, Schilling S, Alvarado R, Tapia E, Lips W, et al. Stigma toward mental
488 illness in Latin America and the caribbean: A systematic review. Revista Brasileira de Psiquiatria.
489 2016; 38(1):73-85. doi: 10.1590/1516-4446-2015-1652

490 14. Gonzalez K. Impact of stigma on help-seeking behavior for mental disorders in Latin America
491 and the Caribbean: Scoping Review. M.Sc. Thesis, Umea University. 2016. Available from:
492 https://umu.diva-portal.org/smash/record.jsf?pid=diva2%3A945712&dswid=8625

493 15. Torres RM. Youth and Adult Education and Lifelong Learning in Latin America and the
494 Caribbean. In: Mayo P, editors. Learning with Adults. International Issues in Adult Education.
495 Rotterdam: Sense Publishers; 2013. pp. 19-31.

496 16. Thornicroft G, Sunkel C, Alikhon Aliev A, Baker S, Brohan E, el Chammay R, et al. The Lancet
497 Commission on ending stigma and discrimination in mental health. The Lancet. 2022;
498 400(10361):1438-1480. doi: 10.1016/S0140-6736(22)01470-2

499 17. Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan-a web and mobile app for
500 systematic reviews. Systematic Reviews. 2016 Dec 5;5(1):1-10. doi: 10.1186/s13643-016-0384-4

501 18. Hong QN, Fàbregues S, Bartlett G, Boardman F, Cargo M, Dagenais P, et al. The Mixed
502 Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers.
503 Education for Information. 2018;34(4):285-291. doi: 10.3233/EFI-180221

504 19. Oliver S, Harden A, Rees R, Shepherd J, Brunton G. An Emerging Framework for Including
505 Different Types of Evidence in Systematic Reviews for Public Policy. Evaluation. 2005;11(4): 428-446.
506 doi: 10.1177/1356389005059383

507 20. Popay J, Roberts H, Sowden A, Petticrew M, Arai L, Rodgers M, et al. Guidance on the
508 Conduct of Narrative Synthesis in Systematic Reviews A Product from the ESRC Methods
509 Programme. 2006. Available from: https://www.lancaster.ac.uk/media/lancaster-university/content-
510 assets/documents/fhm/dhr/chir/NSsynthesisguidanceVersion1-April2006.pdf

511 21. Ryan R, Cochrane Consumers and Communication Review Group. Cochrane Consumers and
512 Communication Review Group: data synthesis and analysis. Cochrane Consumers and
513 Communication Review Group. 2013 June. Available from:
514 https://cccrg.cochrane.org/sites/cccrg.cochrane.org/files/public/uploads/Analysis.pdf

515 22. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77–
516 101. doi: 10.1191/1478088706qp063oa

517 23. Jackson Williams D. Where do Jamaican Adolescents Turn for Psychological Help? Child
518 Youth Care Forum. 2012;41(5):461-477. doi: 10.1007/s10566-012-9177-7

519 24. Jackson Williams D. Help-Seeking Among Jamaican Adolescents: An Examination of
520 Individual Determinants of Psychological Help-Seeking Attitudes. Journal of Black Psychology.
521 2014;40(4):359-383. doi: 10.1177/0095798413488940

522 25. Maloney CA, Abel WD, McLeod HJ. Jamaican adolescents' receptiveness to digital mental
523 health services: A cross-sectional survey from rural and urban communities. Internet Interventions.
524 2020;21:1-9. doi: 10.1016/j.invent.2020.100325

525 26. Nohr L, Ruiz AL, Sandoval Ferrer JE, Buhlmann U. Mental health stigma and professional
526 help-seeking attitudes a comparison between Cuba and Germany. PLoS One. 2021 February
527 11;16(2):1-24. doi: 10.1371/journal.pone.0246501.

528 27. Ramkissoon AK, Donald C, Hutchinson G. Supernatural versus medical: Responses to mental
529 illness from undergraduate university students in Trinidad. International Journal of Social Psychiatry.
530 2017;63(4):330-338. doi: 10.1177/0020764017702412

531 28. Wagenaar BH, Kohrt BA, Hagaman AK, McLean KE, Kaiser BN. Determinants of care seeking
532 for mental health problems in rural haiti: Culture, cost, or competency. Psychiatric Services.
533 2013;64(4):366-372. doi: 10.1176/appi.ps.201200272

534 29. Hannold EM, Freytes IM, Uphold CR. Unmet health services needs experienced by puerto
535 rican OEF/OIF veterans and families post deployment. Military medicine. 2011;176(4): 381–388. doi:
536 10.7205/MILMED-D-10-00334

537 30. James CCAB, Carpenter KA, Peltzer K, Weaver S. Valuing psychiatric patients' stories: Belief
538 in and use of the supernatural in the Jamaican psychiatric setting. Transcultural Psychiatry.
539 2014;51(2):247-263. doi: 10.1177/1363461513503879

540 31. Liu S, Zafer M, Smart Y, Providence K, Katz CL. Knowledge of and Attitudes Toward
541 Alcoholism Among Church Leaders in Saint Vincent/Grenadines. International Journal of Mental
542 Health and Addiction. 2017;15(5):1081-1095. doi: 10.1007/s11469-017-9760-0

543 32. Pretorius C, McCashin D, Kavanagh N, Coyle D. Searching for Mental Health: A Mixed-
544 Methods Study of Young People's Online Help-seeking. Proceedings of the 2020 CHI Conference on
545 Human Factors in Computing Systems. 2020 April; 1-13. doi: 10.1145/3313831.3376328

546 33. Wies B, Landers C, Ienca M. Digital Mental Health for Young People: A Scoping Review of
547 Ethical Promises and Challenges. Frontiers in Digital Health. 2021;3(697072):1-11. doi:
548 10.3389/fdgth.2021.697072

549 34. Mantovani N, Pizzolati M, Edge D. Exploring the relationship between stigma and help-
550 seeking for mental illness in African-descended faith communities in the UK. Health Expectations.
551 2017;20(3):373-384. doi: 10.1111/hex.12464

552 35. Schomerus G, Stolzenburg S, Freitag S, Speerforck S, Janowitz D, Evans-Lacko S, et al. Stigma
553 as a barrier to recognizing personal mental illness and seeking help: a prospective study among
554 untreated persons with mental illness. European archives of psychiatry and clinical neuroscience.
555 2019;269(4):469–479. doi: 10.1007/s00406-018-0896-0

556 36. Randles R, Finnegan A. Veteran help-seeking behaviour for mental health issues: A
557 systematic review. BMJ Military Health. 2022;168(1):99–104. doi: 10.1136/bmjmilitary-2021-001903

558 37. Min JW. The Influence of Stigma and Views on Mental Health Treatment Effectiveness on
559 Service Use by Age and Ethnicity: Evidence From the CDC BRFSS 2007, 2009, and 2012. Sage Open.
560 2019;9(3):1-12. doi: 10.1177/2158244019876277

561 38. Pattyn E, Verhaeghe M, Sercu C, Bracke P. Public stigma and self-stigma: Differential
562 association with attitudes toward formal and informal help seeking. Psychiatric Services.
563 2014;65(2):232-238. doi: 10.1176/appi.ps.201200561

564

565
Supporting Information

566 **S1 Checklist – PRISMA Checklist**

567 **S1 Appendix – Search Strategies**

568 **S2 Appendix – Excluded Papers**

569 **S3 Appendix – Included Papers**

570 **S4 Appendix - Themes and subthemes with example participant quotations for included**

571 **qualitative studies**

572

573

574

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AUTHORS' RESPONSE: Thank you for this comment. We have reviewed the style templates and confirm our manuscript meets PLOS ONE's style requirements.

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AUTHORS' RESPONSE: Thank you for this comment. We have reviewed our reference list and confirm that it is complete and correct.

AUTHORS' COMMENT: In reviewing the manuscript, we have noted that the line numbers were not continuous throughout the entire document. Additionally, the affiliation for Author PCG required correcting (page 1, line 6). Both have been amended and are reflected in the track changes.

Lastly, authors CS, GT, TTS and PCG all received financial support during the time they contributed to this work, which has been disclosed under the 'Acknowledgements' section in the Manuscript (page 24, lines 431-444) as shown in track changes.

Additional Editor Comments:

Abstract-Conclusion:
"This can be applied in the design of culturally appropriate future research, policy, and practice, to target and decrease stigma, and increase help-seeking in the Caribbean."

This statement should be modified. As it is implies that the authors said this can be used to design future research and also design policy, and practice.

My suggestion:
"This can be applied in the design of culturally appropriate future research, and to support policy and practice towards stigma reduction, and improved mental care help-seeking in the Caribbean."

AUTHORS' RESPONSE: We thank the editor for this suggestion. We have incorporated this edit into the manuscript as shown in the Abstract-page 3 lines 46-48.

Methods:
According to the authors: “This systematic review addresses two research questions viz:
(1) What is the impact of mental health stigma on help-seeking in the Caribbean?
(2) What factors underlie the relationship between stigma and help-seeking in the Caribbean?

To achieve objectives (1) and (2), there is the need to undertake a process of triangulation of the data. I have read through the data extraction and appraisal, but I have not seen any mention of triangulation. Does it mean this was captured/presented in some other terms/terminologies?

I know that Triangulation facilitates validation of data through cross verification from more than two sources. Importantly, it also tests the consistency of findings obtained through different instruments and increases the chance to control, or at least assess some of the threats or multiple causes influencing our results. Triangulation will add great value to this paper.

AUTHORS' RESPONSE: Thank you for raising this concern. To achieve objectives (1) and (2), a process of triangulation took place though a meta-synthesis of the quantitative and qualitative data, however we did not use the term triangulation in the original submission and express it in this way. To make it clearer for the reader, we have amended this sentence in the Method-Data synthesis section to make it explicit:

“Lastly, the data underwent a process of triangulation through a thematic meta-synthesis, where the findings from the quantitative and qualitative syntheses were integrated.” (page 9, lines 170-171).

Results - Studies with 3 participants (mentioned in the results section) should be excluded. It is not scientifically appropriate to use findings from 3 to 5 participants (even from qualitative)

AUTHORS' RESPONSE: We thank the editor for their thoughtful response on this. As we are consolidating insights from an area where there is limited information from this geographical region, we believe it is important to include what literature is available to us. We acknowledge that studies with fewer participants may not be representative, however these studies have undergone a quality assessment, and we believe the findings should still be considered as such studies can provide rich, interesting data.

Additionally, the findings of this study aligned with the findings of the other qualitative studies included in this review where the data contributed to common themes generated from the thematic analysis (Making sense of mental health conditions', 'Anticipated/Experienced mental health experiences - illustrated in Supplementary Information - S4 Appendix Themes and subthemes with example participant quotations for included qualitative studies), and thus were not making a singular point.

We want to acknowledge in the manuscript that we recognise some of the included studies have small samples and the implications this may have, and have subsequently added the following extract into the Discussion-Limitations and strengths:

“Some of the included studies had small samples, thereby caution may be needed when interpreting the findings of this review. Nonetheless, the findings from studies with lower participant numbers did not drive any single conclusions drawn in this research but rather corroborated findings from other studies, and by including all eligible studies regardless of sample size this review was able to analyse and synthesise important and interesting data from the limited existing literature to provide a thorough evaluation.” (page 22 lines 406-411)

Results - I perceive that to arrive at an efficient conceptual model, it should be based on triangulation of the data from the meta-synthesis.

AUTHORS' RESPONSE: Thank you for this comment. We agree that triangulation is required for an efficient conceptual model. The meta-synthesis is a result of triangulating the quantitative and qualitative data, however as we mention in a comment above, we previously did not explicitly state this. This how now been amended as demonstrated in the following sentence:

"The results from the quantitative and qualitative syntheses have been triangulated to produce an overall meta-synthesis." (page 18, lines 313-314)

Discussion, future research - These sections are well written.

AUTHORS' RESPONSE: We thank the editor for their positive feedback on these sections.

Implications for policy:
The authors said, "There is a need to incorporate mental health knowledge into early education and public awareness that includes stigma-reducing strategies".

It seems not too logical connecting early education and public awareness to stigma reduction. I suggest that it would be more appropriate if we think of the interventions that involves community-based mental health education and health promotion that leverages public awareness on mental health, stigma and help-seeking.

AUTHORS' RESPONSE: Thank you for this comment. We agree with the editor's reflection and suggestion and have made the following edit:

'There is a need for interventions that involve community-based mental health education and health promotion to contribute to public awareness on mental health, stigma and help-seeking." (page 21, lines 390-392)

Reviewer's Comments:

[NOTE: If reviewer comments were submitted as an attachment file, they will be attached to this email and accessible via the submission site. Please log into your account, locate the manuscript record, and check for the action link "View Attachments". If this link does not appear, there are no attachment files.]

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AUTHORS' RESPONSE: Thank you, we confirm this has been completed.