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The effectiveness of social media campaigns in improving knowledge and attitudes towards mental health and help-seeking in high-income countries: A scoping review

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Abstract

Background: The prevalence of mental health problems is increasing, particularly among young people, making the prevention of mental health problems and improvements in care a public health priority. Social media, with its wide reach and low-cost information dissemination, has emerged as an important tool for public mental health campaigns. However, there is limited understanding of the reach of public mental health social media campaigns and their impact on mental health knowledge, attitudes, stigma and behaviors, such as help-seeking.

Objective: This review aimed to assess the effectiveness of social media campaigns in improving knowledge and attitudes towards mental health, reducing stigma, promoting help-seeking behavior, and reaching underserved communities.

Methods: A scoping review was conducted, involving a comprehensive search of five databases and grey literature from January 2004-May 2024. We included quantitative evaluations of social media public mental health campaigns from high-income countries with comparable social media use and public healthcare systems. A narrative synthesis summarised the study characteristics, campaign exposure, reach and effectiveness by outcomes.

Results: The review included 26 articles for analysis. Less than half of the articles (11/26, 42%) reported on the reach of mental health campaigns, but for those that did, younger age groups and females were more likely to be aware of campaigns. The most frequently reported outcomes were attitudes about mental health (17/23, 74%) and stigma (17/23, 74%), followed by mental health knowledge (16/23, 70%) and behavior change (15/23, 65%), such as seeking help for a mental health condition. While stigma and attitudes showed the most improvement pre and post campaigns (5/11, 45%), behavior change showed the least positive change over time (1/8, 13%). However, behavior change was the most improved outcome for those who were campaign aware compared to unaware (12/12, 100%), whereas positive attitudes often did not differ. In fact, some articles showed campaign awareness was associated with negative stereotypes.

Conclusions: The evidence highlights the potential of social media campaigns in improving mental health knowledge, attitudes, stigma and behavior change. However, due to the methodological limitations of these evaluations, it is challenging to determine if the positive changes in these outcomes are a result of the campaigns or other factors. Campaign awareness seems to be important for initiating behavior change, but these changes are often short-lived. Sustainable impact on mental health requires both individual behavior change and service improvements. Targeting more mental health campaigns at underserved groups could help to reduce stigma and raise awareness in these groups, which could lead to timelier access of services. Consistent

measurement of campaign reach and behavior change outcomes could help to understand and maximise campaign impact.

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Background: The prevalence of mental health problems is increasing, particularly among young people, making the prevention of mental health problems and improvements in care a public health priority. Social media, with its wide reach and low-cost information dissemination, has emerged as an important tool for public mental health campaigns in high-income countries. However, there is limited understanding of the reach of public mental health social media campaigns and their impact on mental health knowledge, attitudes, stigma and behaviors, such as help-seeking.

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Conclusions: The evidence highlights the potential of social media campaigns in improving mental health knowledge, attitudes, stigma and behavior change. However, due to the methodological limitations of these evaluations, it is challenging to determine if the positive changes in these outcomes are a result of the campaigns or other factors. Campaign awareness seems to be important for initiating behavior change, but these changes are often short-lived. Sustainable impact on mental health requires both individual behavior change and service improvements. Targeting more mental

health campaigns at underserved groups could help to reduce stigma and raise awareness in these groups, which could lead to timelier access of services. Consistent measurement of campaign reach and behavior change outcomes could help to understand and maximise campaign impact.

Keywords

Social Media, Health Campaigns, Social Marketing, Review, Mental Health, Public Health, Help-Seeking Behavior, Social Stigma, Health Education, Health Promotion

Introduction

The prevalence of mental disorders has increased in the last 20 years, particularly for young people, and preventing and addressing poor mental health has become a public health priority for many countries [1-5]. Data shows that increasing numbers of people are seeking help from health care services for their mental health concerns [6-8]. However, many people still do not seek help for mental health problems, in part due to stigma, poor access and lengthy waiting lists [9-11]. It is important to seek appropriate and timely help for mental health problems, as early detection of issues can reduce the risk of experiencing further mental health problems and complications associated with mental illness. Early intervention can also reduce costs in the use of health services because of better mental health [9].

Social media has the potential to be an effective tool in public mental health campaigns to reduce stigma, raise awareness of mental health and encourage help-seeking and access to mental health care, as it can disseminate information quickly to a wide audience at low cost [12]. *Social media* refers to “internet-based tools that allow individuals and communities to gather and communicate; to share information, ideas, personal messages, images, and other content; and, in some cases, to collaborate with other users in real time” [13, 14]. Social media use has become ubiquitous; it is estimated that 5.17 billion people globally used at least one form of social media in 2024 [15]. Given the number of people using social media, there is great potential to reach large numbers of people with communications about mental health awareness and services, and address

stigma regarding mental health [12, 16]. Social media may also be more likely than traditional campaigns to capture the attention of and reach certain underserved groups who frequently use social media [17-19]. These groups, such as LGBTQ+ young people, are important to reach because they are disproportionately affected by mental health problems and often face challenges in accessing care. [17, 20-23].

Behavior change theories, such as the Capability, Opportunity, Motivation - Behavior Change (COM-B) model, provide a framework for understanding how social media public health campaigns can result in behavior change, such as increased seeking of mental health services [16, 24, 25]. This model argues that changes in behavior occur as the result of an interaction between capability, opportunity, and motivation. Social media public mental health campaigns can improve people's psychological capabilities to engage in behaviors like help-seeking by improving mental health awareness, knowledge, literacy and capacity to navigate mental health service access. They can improve people's motivation to engage in behaviors by changing reflective motivations or attitudes about mental health problems and discouraging fear of mental ill health. Campaigns can also improve opportunities for behavior change by influencing social and cultural norms and stigma around mental health and providing access to resources. These campaigns must also effectively reach and engage individuals to facilitate changes in their knowledge, attitudes, and behaviors [26].

There are no previous reviews that have synthesised the evidence for how effective social media public mental health campaigns are at changing behaviors like help-seeking for mental health concerns. Further, none have examined how effective they are at facilitating the components of this behavior change, such as improving knowledge, changing attitudes and reducing stigma. There is also limited understanding of whether social media campaigns reduce inequalities in access and help-seeking by reaching underserved groups for mental health problems, such as those from ethnic minority groups, LGBTQ+ individuals, those who are socioeconomically disadvantaged and young men [20, 22]. Given the lack of previous reviews and the increasing use of social media in public

health campaigns, there is a need for a broader mapping of the extent of the evidence relating to public mental health social media campaigns [27]. Understanding the impact of social media campaigns on behavior change, including knowledge, attitudes, and stigma, especially for underserved groups, could help improve targeted help-seeking campaigns and identify gaps in the literature that need further investigation. This review will focus on high-income countries where use and access to social media and resources for public health campaigns are comparable.

Review questions

1. Is there evidence that social media campaigns have changed behavior (e.g., led to increased help-seeking), improved knowledge and attitudes towards to mental health, and reduced stigma in high-income countries?
2. To what extent are social media campaigns effective at reaching underserved groups and changing their behaviors, knowledge, attitudes and reducing stigma in high-income countries?

Methods

We developed a review protocol according to the methodological guidance for scoping reviews [27-29] and the protocol is available via the Open Science Framework [30]. This review is reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews [31].

Search strategy

An experienced research librarian helped to develop the search strategy, which included a combination of subject headings and key word searches for the key concepts of ‘Social Media’, ‘Mental Health’ ‘Health Knowledge, Attitudes, Practice’ and ‘Help Seeking Behavior’. Five databases were searched including MEDLINE, EMBASE, PsycINFO, Web of Science and CINAHL. Multimedia Appendix 1 shows the full search strategy for MEDLINE which was adapted for the other databases. The grey literature, such as public mental health campaign websites identified from

the review and leading mental health charity websites in the UK and other high-income countries, were searched for relevant reports not published in peer-reviewed journals. Reference lists of eligible studies and review articles were also hand searched. We included articles published from 2004—as this was the advent of widespread social media use—to May 2024 [32].

Inclusion and Exclusion Criteria

The inclusion and exclusion criteria listed in Table 1 were applied.

Table 1. Inclusion and exclusion criteria for screening

Key Concepts	Inclusion Criteria	Exclusion Criteria
Population	Studies where the campaign targeted the general population or demographic groups e.g. men, young people. High-income countries where use and access to social media and resources for public health campaigns are comparable.	Studies where campaigns were targeted only at clinical populations or professionals. Low-middle income counties.
Intervention	Social media public mental health campaigns where the aim of the campaign was to raise awareness of mental health, change attitudes towards mental health, reduce stigma and/or encourage help-seeking. This includes mass media campaigns that use other media but only if there is data on the impact of the social media element.	Social media campaigns for related outcomes such as physical activity and bullying. Campaigns solely focused on preventing suicide, serious mental illness, or the mental health impacts of covid. Online support groups. Experimental vignettes of campaigns comparing different kinds of messaging.
Outcomes	key performance indicators and metrics related to social media use in health promotion, as defined by Neiger et al, which includes exposure, reach and low, medium and high engagement [26]. We adapted this framework to capture more outcomes related to behavior change, so high engagement outcomes also included knowledge, attitudes and beliefs, stigma, access to resources and help-seeking intentions and behaviors.	

Study type(s)	Experimental studies, quasi-experimental studies, pre and post studies, cross-sectional and observational studies.	Reviews and qualitative designs.
Publication type(s)	Peer reviewed articles. Reports from government agencies or charities who have evaluated their social media mental health campaigns.	Theses, protocols, dissertations, conference papers, editorials letters, notes, books, comments, and meeting abstracts.
Language	Article in English.	Articles not in English.

Screening

Rayyan, an online tool, was used to screen abstracts according to the inclusion and exclusion criteria outlined in Table 1. RP reviewed all abstracts and APK and JMS reviewed a proportion (1026/3396, 30%) of the abstracts after duplicates were removed. RP reviewed all full text articles and APK and JMS reviewed a proportion of full text articles (11/69, 16%). Disagreements were resolved in discussions between reviewers and the other authors.

Data extraction

We extracted data using a Microsoft Excel to collect key information on article characteristics, details of the campaigns, methodological approaches, outcome measures, and key findings. To measure the success of social media campaigns we captured outcomes derived from an adapted version of Neiger et al.'s key performance indicators and metrics related to social media use in health promotion, which includes insights, exposure, and reach and low-, medium- and high-engagement (Table 2) [26]. Outcome measures capturing changes in knowledge about mental health conditions, attitudes towards mental health, stigma and intention to seek help for mental health problems were not accounted for using the original framework, but were categorized as high-engagement with a campaign, as greater knowledge and intentions are precursors to behavior change and taking actions offline [25, 26, 33]. We assessed changes in outcomes both before and after the campaign, as well as between individuals who were aware of the campaign and those who were not. We only reported differences that were statistically tested and where p-values, confidence intervals, and/or effect sizes were available.

Table 2. Descriptions and examples of social media related outcomes to be extracted from articles.

Outcomes	Descriptions	Examples of measures
Insights[a]	User feedback	Users' opinions of information
Exposure	Views of social media content	Campaign awareness, number of views (engagement with content e.g. watching videos), Impressions (number of times digital content is displayed regardless of whether it is clicked or not)
Reach	Interaction with social media content and users' characteristics	Followers, demographics of users
Low-level engagement	Agreement with the social media content	Number of likes of posts
Medium-level engagement	Users creating or sharing their own social media messages or sharing campaign messages on their own profiles	Number of posts/retweets
High-level engagement	Users' understanding of the messaging, intention to change their behavior, or actions taken online or offline related to the desired behavior change	Mental health knowledge and literacy, Attitudes or beliefs about mental health Stigma e.g. desire for social distance Behavior change: Seeking help for mental health, activities for positive mental health, help-seeking intentions

Data synthesis

We conducted a narrative synthesis of study findings summarising the characteristics of social media campaigns (aims, target audience, target location and campaign developer e.g., charity, government) [34]. The study characteristics such as settings, design, participants and main findings were summarised. We organised findings by outcome by summarising people's exposure to the campaign (e.g. campaign awareness and views and impressions) and low-medium level engagement with the campaign on social media (e.g. likes and shares on social media). To summarize the campaign's reach, especially among underserved communities, we gathered data on the demographics of the individuals reached by the campaign where available. We summarised how effective social media campaigns were at improving high engagement i.e. people's knowledge, attitudes, stigma (which was largely measured by desire for social distance) and behavior change (which included intentions to

seek help for mental health, service use and activities to enhance positive mental health).

Results

A total of 5827 publications were identified from the database search and a further 28 were identified from grey literature. After screening, 26 sources were included for data extraction and analysis (See PRISMA diagram in Figure 1).

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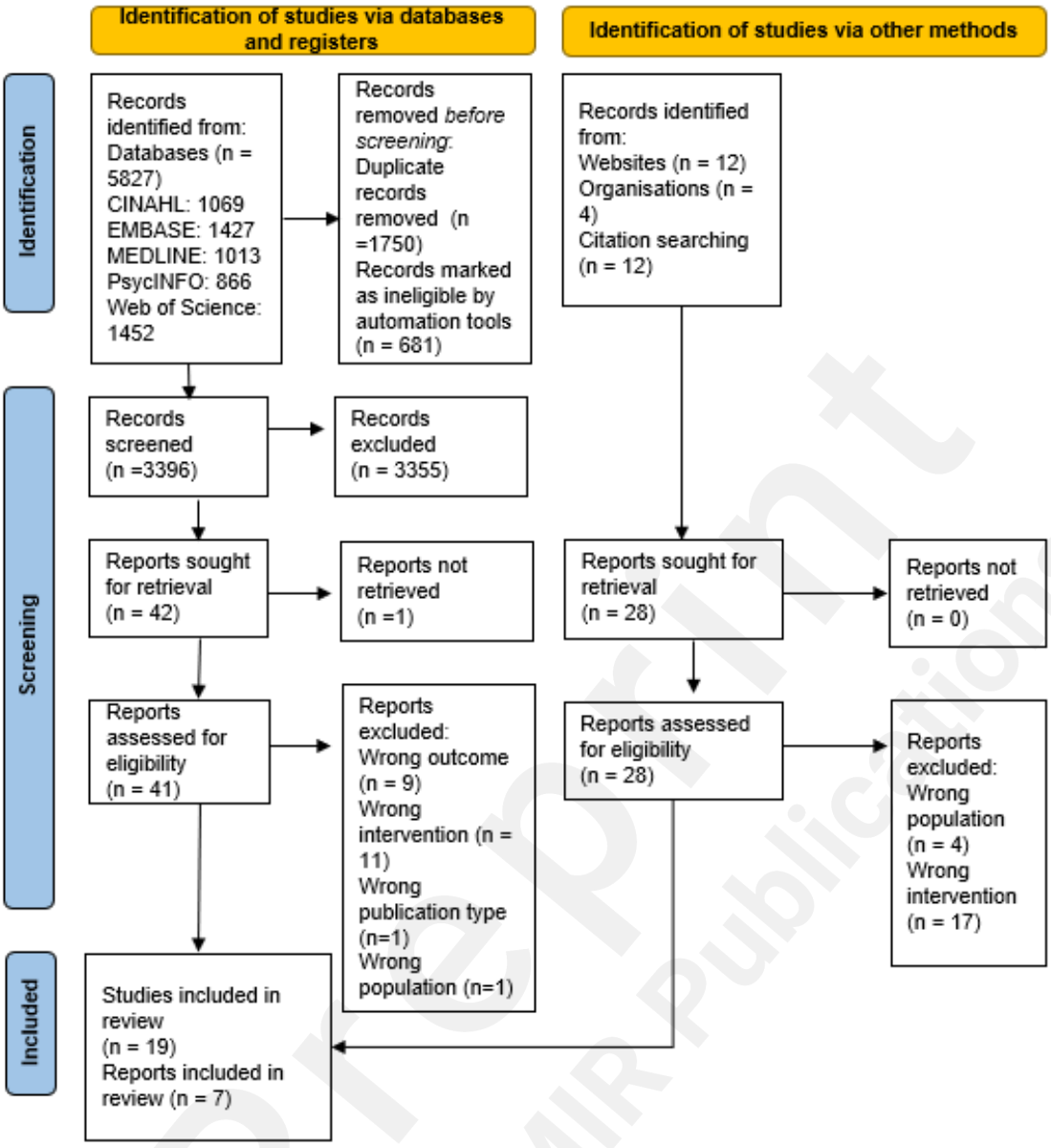

Figure 1. PRISMA flow diagram showing the process of inclusion and exclusion of sources.

Study characteristics

Table 3 describes the characteristics of the campaigns. The campaigns included in this review were mostly undertaken in the United States (10/26, 39%), followed by the United Kingdom (8/26, 31%) and Canada (4/26, 15%). The most common social media platforms used by campaigns were Facebook (13/26, 50%), followed by X (formerly Twitter, 7/26, 27%), and Instagram (4/26, 15%), YouTube (4/26, 15% respectively). All the campaigns that reported the social media platforms they used, reported delivering content on several platforms (15/26, 58%), with most campaigns using

three platforms (10/26, 39%).Most of the campaigns were developed by government agencies like local or national health or public health departments (12/26, 46%) and by charities (12/26, 46%), followed by health services (10/26, 39%), universities (4/26, 15%) and sports teams (4/26,15%). Just over half of the campaigns were developed by multiple agencies (14/26, 54%).

Table 3. Study characteristics of included articles sorted by campaign and year

First Author, Year		Campaign						Publication type
	Name	**Evaluation period**	**Aims**	**Target users**	**Target location**	**Developer**	**Social media platforms used**	
Time to change campaigns								
Evans-Lacko, 2013	Time to Change (phase 1)	2009-2011	1. To reduce stigma and discrimination	Mid-20s to mid-40s, from middle-income groups	UK	Charity	Facebook, Twitter and YouTube	Journal article
Henderson, 2016	Time to Change (phases 1-2)	2008-2015	1. To reduce stigma and discrimination	Mid-20s to mid-40s, from middle-income groups	UK	Charity	NR	Journal article
Henderson, 2017	Time to Change (phase 2)	2012-2016	1. To reduce stigma and discrimination 2. To increase help-seeking	Mid-20s to mid-40s, from middle-income groups	UK	Charity	NR	Journal article
Sampogna, 2017	Time to change (phases 1-2)	2009-2014	1. To reduce stigma and discrimination	Mid-20s to mid-40s, from middle-income groups	UK	Charity	Twitter & Facebook	Journal article
Gonzalez, 2019	Time to Change (phase 3)	2017-2019	1. To reduce stigma and discrimination 2. To increase help-seeking 3. To address inequalities in demographic groups	Mid-20s to mid-40s, mid-forties, middle-low income groups, males, parents	UK	Charity	Facebook, Twitter, Instagram and Snapchat	Journal article
Henderson, 2020	Time to Change (phases 1-3)	2008-2019	1. To reduce stigma and discrimination 2. To increase help-seeking 3. To address inequalities in demographic groups	Mid-20s to mid-40s, mid-forties, middle-low income groups, males,	UK	Charity	NR	Journal article

				parents				
WhyWeRise campaign								
Collins, 2018	WhyWe Rise	2018	1. To reduce stigma 2. To increase awareness of how to seek mental health care.	Ages 14–24	Los Angeles, US	Multiple – government body and health services	Facebook, Instagram, and Twitter	Report
Collins, 2020	WhyWe Rise	2019	1. To reduce stigma 2. To increase awareness of how to seek mental health care.	Ages 14–24	Los Angeles, US	Multiple – government body and health services	Facebook, Instagram, and Twitter	Report
Collins, 2022a	WhyWe Rise	2021	1. To create awareness of two key resources and drive residents to them: the website and Helpline	Ages 14–24 and Hispanic, Black, and Asian residents	Los Angeles, US	Multiple – government body and health services	Facebook, Instagram, and Twitter	Report
Collins, 2022b	WhyWe Rise - L.A. Dodgers Mental Health Campaign	2020-2021	1. To raise awareness of resources and stigma-reduction	Hispanic residents	Los Angeles, US	Multiple – sports team, government body and health services	Facebook, Instagram, and Twitter	Report
Collins, 2022c	WhyWe Rise - L.A. Dodgers Mental Health Campaign	2022	1. To raise awareness of resources and stigma-reduction	Hispanic residents	Los Angeles, US	Multiple – sports team, government body and health services	Facebook, Instagram, and Twitter	Report
Act-Belong-Commit (ABC) **and related campaigns**								
Drane, 2022	Act-Belong-Commit	2018-2019	1. To improve mental health literacy and reduce stigma 2. To stimulate people to undertake activities conducive to good mental health	General public	Western Australia, Australia	Multiple – universities, and government body	NR	Journal article
Santini, 2022	The ABCs of Mental Health	2019-2021	1. To encourage individuals to engage in mentally healthy behaviors	General public	Denmark	University	Facebook, Instagram & LinkedIn	Journal article
In One Voice campaign								
Livingston, 2013	In One Voice	2012	1. To raise mental health awareness and improve attitudes towards mental health issues	Ages 13-25	British Columbia, Canada	Multiple – Sports team, government body and health services	Facebook, Twitter, and YouTube	Journal article

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Livingston, 2014	In One Voice	2012-2013	1. To raise mental health awareness and improve attitudes towards mental health issues	Ages 13-25	British Columbia, Canada	Multiple – Sports team, government body and health services	Facebook, Twitter, and YouTube	Journal article
WhatMakesUs and Action Minded campaigns								
Public Goods People, 2019	Action minded	2018-2019	1. Reducing mental health stigma	General public	Several States, US	Charity	NR	Report
Diouf, 2022	WhatMakesUs and Spokesimals Midwest	2020-2021	1. Reducing mental health stigma	General Public	Several Midwestern States, US	Multiple-charity and wellness consultancy	NR	Journal article
Alvarado-Torres, 2023	WhatMakesUs	2021-2022	1. Reducing mental health stigma	General Public	Several Midwestern States, US	Multiple-charity and wellness consultancy	Facebook and Instagram	Journal article
Other campaigns								
Hann, 2016	Six Ways to Wellbeing Campaign	2014-2016	1. To encourage people to improve their mental wellbeing	General public	Kent, UK	Multiple - Government body and health services	Twitter, Facebook and YouTube	Report
Hahn, 2023	Every Mind Matters	2019-2022	1. To encourage people to improve their mental wellbeing	General public	UK	Government body	NR	Journal article
Hansson, 2016	Hjarnkoll	2009-2014	1. To reduce stigma	8 regions in Sweden and some national reach	Sweden	Government body	NR	Journal article
Booth, 2018	Bell Let's Talk	2006-2015	1. To reduce stigma	General public	Ontario, Canada	Tele-communications company	NR	Journal article
Zenone, 2020	Everything Is Fine	Not reported	1. To raise awareness of resources	Ages 12-17, males	British Columbia, Canada	Multiple – Charity, health services,	Instagram, snapchat	Journal article
Collins, 2019	Each Mind Matters	2014-2016	1. To improve mental health 2. To increase help-seeking	General public	California, US	Government body	NR	Journal article
Thompson, 2021	Look Around	2017-2018	1. To reduce stigma and increase help seeking	Ages 11-18 in one Midwestern County	Midwestern county, US	Multiple – schools, universities, health services and students.	NR	Journal article
Coughlan, 2021	#YMHanimate	2019-2020	1. To develop engaging public	Ages 16-25	Ireland	Multiple – universities	Twitter, Facebook,	Journal article

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			mental health animations			and charities	and YouTube	

There were five campaigns that were evaluated by multiple studies: *Time to Change, WhyWeRise, Act Belong Commit* related campaigns, *In One Voice and Action Minded* and *WhatMakesUs* related campaigns (see Table 4 for a summary of the social media activities of these campaigns).

Table 4. Summary of the social media activities for the most common campaigns

Campaign	Key Social media Components
Time to Change	Used social media to deliver key messages and encourage behavior change through small actions, such as starting conversations about mental health with friends. It suggested simple ways to change behavior and recruited individuals to engage in local campaign activities.
WhyWeRise	Partnered with the Los Angeles Dodgers (MLB team) to expand reach, especially to Hispanic residents. It promoted community engagement with mental health issues and created a movement to address barriers to mental health access using interviews and stories.
Act Belong Commit	Encouraged people to be physically, spiritually, socially, and mentally active in ways that increase their sense of belonging to their communities.
In One Voice	Launched by the Vancouver Canucks (hockey team) in collaboration with local health authorities and charities. It included a 2-minute public video featuring a popular Canucks player discussing mental health issues and promoting the mindcheck website. They encouraged viewers to pledge support for friends and family members with mental health issues by creating and submitting online videos to mindcheck.ca. It featured in several venues and forums, including a home game of the Vancouver Canucks.
Action Minded / WhatMakesUs	Contact-based campaign inviting individuals with mental health conditions to share video and photo testimonials of their personal experiences with mental health and stigma. Community-based organisations received tailored images and videos each month, focusing on new themes related to mental health stigma.

Key findings of campaign evaluations by outcome

Exposure

Campaign Awareness

Multimedia Appendix 2 provides a table of the key findings of the studies. Campaign awareness was measured using surveys after campaigns by almost three quarters (19/26, 73%) of the articles. Only five (5/19, 26%) of the articles including this measure reported campaign awareness above 50% at any given time [35-39]. The highest level of campaign awareness was during the 2012 promotion of the UK *Time to Change* campaign, with 81.7% of respondents reporting campaign awareness [38]. The lowest level was 12%, reflecting poorer campaign awareness for *The ABCs of Mental Health* campaign in Denmark [40].

Of the articles assessing campaign awareness, around a third (7/19, 37%) measured this outcome at several points throughout the duration of the campaigns. For the *Time to Change* campaign, two articles found that there was an increase in campaign awareness in phase one of the campaign, rising from 39% in 2009 to 81.7% in 2012 [38, 41]. During phase two, two articles found awareness decreased between 2013-2014 to around 20% in 2014 [42, 43] and one article found it remained the around the same in phase three (~33%) from 2017-2018 [44]. The US *WhyWeRise* campaign showed an initial increase in campaign awareness, rising from 20% in 2018 to 50% in 2020, but this dropped to 37% in 2021 [39, 45]. The Canadian *In One Voice* campaign showed an increase in campaign awareness, from 25% in 2012 to 49% in 2013 [46].The US *WhatMakesUs* campaign awareness increased from 30% in 2020 [47] to 53% during 2020-2022 [35].

Views and impressions

Over a third of the articles (9/26, 35%) reported social media campaign exposure outcomes by recording digital metrics such as views and impressions [35, 38, 45, 46, 48-52] (Multimedia Appendix 2). Three of these articles (3/9, 33%) found that Facebook was the social media platform which accumulated most views, compared to other platforms; all these campaigns targeted adults [35, 45, 51].In the campaign in 2019-2020, Facebook views were found to account for nearly two thirds of the campaign's social media views, making up 10,437 of the total 15,848 views [51]. In the

2021-2022 campaign, out of a total of 2,558,291 impressions, Facebook accounted for 1,838,300 whilst Instagram accounted for 719,991 [35].

Reach

Under half of the articles (11/26, 42%) reported measures of reach (who their campaigns targeted) [35, 39, 41, 42, 44, 45, 49, 51, 53-55] (Multimedia Appendix 2). See Table 5 for a summary of the reach of the campaigns by key demographic characteristics. Campaign awareness varied significantly across different demographic factors. In some campaigns, there was higher initial exposure among Black and Hispanic groups, but lower awareness among Asian respondents in some campaigns. Women were generally more aware of the campaigns than men, and younger age groups showed higher awareness. Socioeconomic status had mixed results. Additionally, factors such as having children, familiarity with mental illness, living in specific regions, and lower education levels were associated with increased campaign awareness. Campaigns that aimed to target underserved populations appeared to do so effectively by utilising different languages and working with popular sports teams and mental health activists to share and create information [39, 53, 55].

Table 5. Summary of the reach of the included social media campaigns

Demographic factor	Percentage of articles reporting reach [references]	Key Findings
Ethnicity	27% (7/26) [35, 39, 41, 42, 53, 54, 56]	- Time to change: Increased exposure for those of Black ethnicity initially but this declined in the latest evaluation [41, 42, 56]. - WhyWeRise: Increased exposure for Hispanic populations but lower awareness among Asian respondents [39, 53, 54]. - WhatMakesUs: Increased exposure for non-Hispanic White respondents [35].
Gender	27% (7/26) [35,	- Most articles found increased campaign

	39, 41, 49, 51, 53, 56]	awareness among women compared to men (4/7, 57%) [35, 41, 49, 51]. - Two articles (2/7, 29%) found that men were more likely to be aware of campaigns than women [53, 56].
Age	19% (5/26) [35, 39, 45, 51, 53, 54]	- Younger age groups were more likely to be aware of campaigns.
Socioeconomic Group	8% (2/26) [54] [42]	- Mixed findings: lower awareness among lower socioeconomic groups in one article [42]; greater awareness among lower-income individuals in another [54].
Other Demographics	12% (3/26) [44, 54, 55]	- Factors such as having children, familiarity with mental illness, ever having a mental health condition, and living in London or the East Midlands regions of the UK and having a high school degree or less were associated with campaign awareness.

Low-medium engagement with campaigns

Low engagement, such as the number of likes a campaign post received, was reported in four articles (4/26, 15%) [35, 49, 52, 55]. Low engagement varied widely across campaigns with one campaign receiving 758 likes on Facebook [49], whereas another reported 23,763 Facebook engagements [35]. In two campaigns targeted at adults, one in 2014-2016 and one in 2021-2022, Facebook received more engagements than Instagram, Twitter and YouTube [35, 49]. Medium engagement, such as sharing and reporting campaign content, was reported in two articles (2/26, 8%); one reported 78,520,289 retweets [24] and one only 2,563 [49]. Large quantities of views did not necessarily equate to large quantities of active engagement with the campaign. For example, the US *WhatMakesUs* campaign had a total of 2,558,291 impressions, but only 27,053 engagements (likes, comments, shares or post clicks), and 92,313 website visits [35]. In a local UK campaign, there were

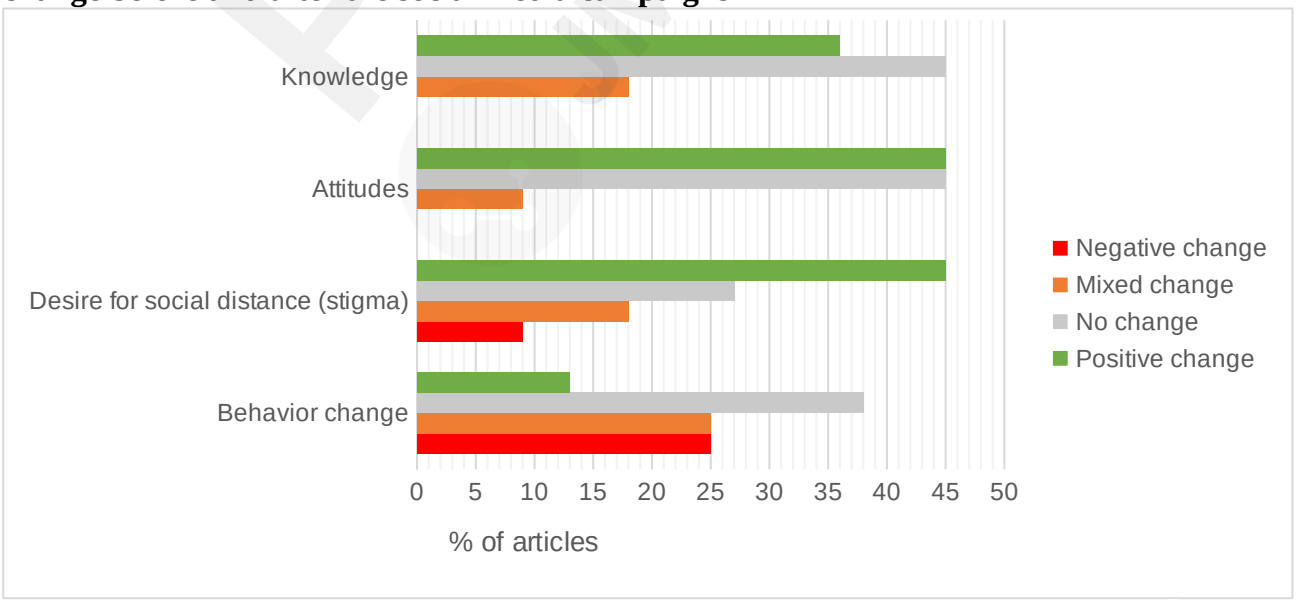
246,255 X (formerly Twitter) impressions and 440 Tweet likes during the campaign.

High level engagements

Most of the articles (23/26, 89%) reported indicators of high engagement (Multimedia Appendix 2). Articles used cross-sectional surveys to assess changes in these outcomes. Over half of the articles (14/23, 61%) compared these outcomes pre and post campaign. Almost three quarters (17/23, 74%) compared these outcomes between those who were aware of the campaign and those who were not. Attitudes about mental health (17/23, 74%) and stigma were most frequently reported (17/23, 74%,), followed by mental health knowledge (16/23, 70%) and behavior change (15/23, 65%).

Figure 2 shows how across all articles, stigma, as measured by desire for social distance (5/11, 45%), and attitudes about mental health (5/11, 45%) most frequently showed improvement pre and post campaigns. Behavior change showed the least positive change over time, with only one article reporting a significant improvement in seeking help for mental health post-campaign compared to pre-campaign (1/8, 13%). Many articles across these outcomes found mixed findings, in which changes occurred for some items of an outcome measure but not others, or when changes were evident in one demographic group but not in others.

Figure 2. Percentage of articles showing changes in knowledge, attitudes, stigma and behavior change before and after the social media campaigns

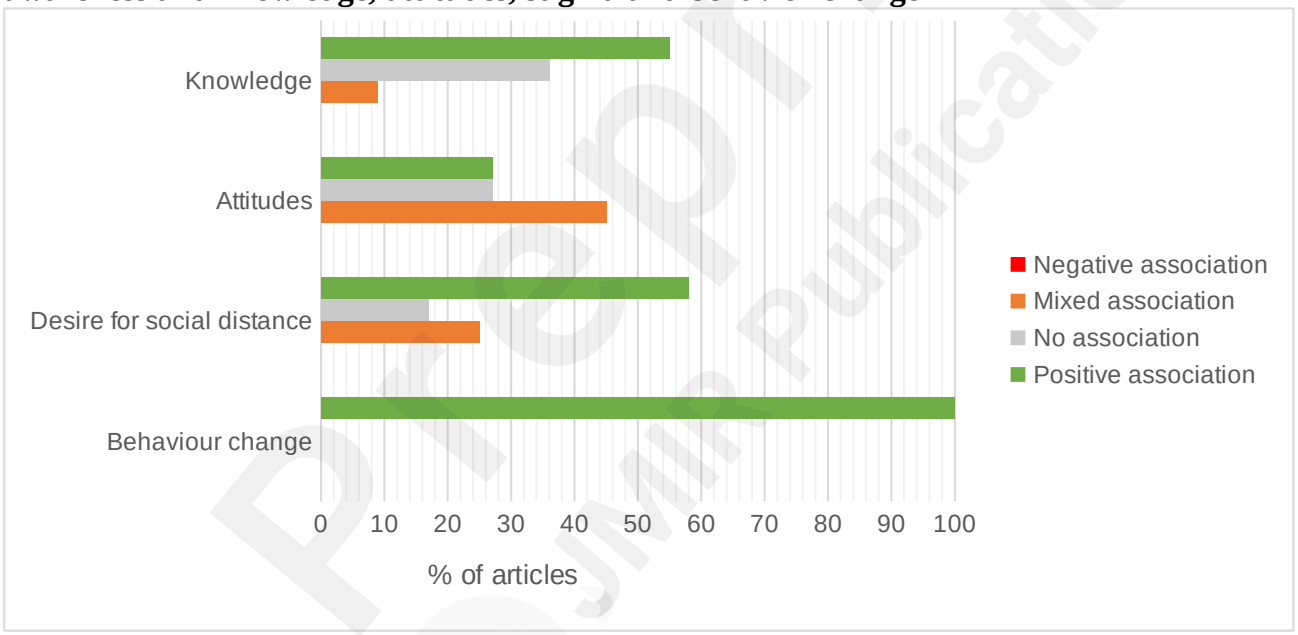


Note: Mixed findings were reported when changes occurred for some items of an outcome measures but not others, or when changes

were evident in one demographic group but not in others.

Conversely, analyses of post-campaign surveys comparing outcomes between individuals who were aware of the campaigns and those who were not, found that increased awareness was most often associated with positive behavior changes (including seeking help for mental health, activities for positive mental health and help-seeking intentions) (12/12, 100%). However, increased awareness was less frequently associated with positive changes in attitudes towards mental health (Figure 3; 3/11, 27%). Multimedia Appendix 3 shows a breakdown of high-engagement outcomes by the five main campaigns that were evaluated across multiple studies and the sections below provide a more detailed breakdown of these outcomes.

Figure 3. Percentage of articles showing the relationship between social media campaign awareness and knowledge, attitudes, stigma and behavior change



Note: Mixed findings were reported when changes occurred for some items of an outcome measures but not others, or when changes were evident in one demographic group but not in others.

Knowledge

The most common tool used to measure knowledge was the Mental Health Knowledge Schedule (MAKS), which was used by just under half of articles measuring knowledge (7/16, 44%) [38, 41, 42, 48, 56-58]. One article (1/16, 6%) in this group used the Mental Health Literacy—Knowledge for Recognition (MHL-REC) scale and the Mental Health Literacy—Knowledge for Management (MHL-ACT) scale [59]. Other articles used their own scales, with some adapted from the MAKS.

As shown in Figure 2, of the articles assessing knowledge improvement pre and post campaign, most (5/11, 45%) found no significant change [38, 41, 44, 46, 52] and less than a third (4/11, 36%) found an improvement post campaign [42, 55, 57, 58]. Two articles (2/11, 18%) reported mixed findings [47, 60]; knowledge improved in some areas, such as for agreement that medication can be an effective treatment for people with mental health conditions, but no changes were found for agreement that therapy can be effective [47]; or knowledge improvement was not sustained [60].

In the post-campaign surveys, most articles (6/11, 55%) that assessed knowledge differences between those aware of the campaign and those unaware found that campaign awareness was associated with greater knowledge [38, 40, 41, 44, 55, 60] (Figure 3). Four articles (4/11, 36%) found no significant difference [37, 45, 47, 61]. One article (1/11, 9%) reported mixed findings; knowledge related to the effectiveness of therapy and counselling, but not medication, improved in the campaign aware group [35].

Attitudes

The Community Attitudes to Mental Illness (CAMI) was the most widely used tool for capturing attitudes, and was used in seven articles (7/17, 41%) [38, 41, 42, 48, 56-58]. Two articles (2/17, 11%) used a scale developed by another author [46, 52]. Other articles used their own scales, with some adapted from the CAMI.

Of the articles comparing change in attitudes pre and post campaign, most (5/11, 45%) showed improvement post campaign [42, 46, 55, 57, 58] (Figure 2). The same proportion of articles (5/11, 45%) reported no significant change in attitudes post campaign [38, 41, 44, 47, 52]. One article (1/11, 9%) reported mixed changes whereby there was significantly less change in African American respondents compared to White respondents post campaign [62].

Only three (3/11, 27%) articles found more positive attitudes in campaign aware individuals compared to non-campaign aware individuals [38, 47, 55] (Figure 3). Three articles (3/11, 27%) found no significant difference [35, 44, 45]. Five articles (5/11, 45%) reported mixed findings, in

which campaign awareness was associated with some attitude measurement items but not others [37, 41, 53, 54, 61]. For example, one article found no significant change for the item about whether people with mental health problems should not be given any responsibility [41]. In the *WhyWeRise* campaigns in 2019, they found that campaign aware individuals compared to non-campaign aware individuals tended to agree with one of the negative stereotypes they assessed, that those who have had a mental illness will never contribute much to society [37]. In 2021, they found campaign aware individuals compared to non-campaign aware individuals tended to agree with two negative stereotypes, that a person with a mental illness is a danger to society and that people who have had a mental illness are never going to be able to contribute much to society [54]. In the latest evaluation, in 2022, it was found that campaign aware young people compared to those who were unaware were significantly more likely to report a desire to delay seeking mental health treatment out of fear of others finding out, but no other attitudes differed and this did not differ for adults [53].

Stigma

Just over half of articles (9/17, 53%) used their own scales measuring stigma via measuring desire for social distance, with most adapted from the Reported and Intended Behavior Scale (RIBS). The RIBS was used in just under half of articles assessing stigma (8/17, 47%).

Of the articles comparing stigma pre and post campaign, just under half reported reduced desire for social distance post campaign (5/11, 45%) [42, 46, 47, 57, 58] (Figure 2). Three articles (3/11, 27%) reported no significant change in desire for social distance from baseline to follow-up [38, 44, 55]. Two articles (2/11, 18%) showed mixed findings [41, 52]. In the UK *Time to Change* campaigns, Evans-Lacko et al. found only a single item about being willing to live with someone with a mental health problem showing significant improvement post campaign [41, 52]. In the Canadian *In One Voice* campaign, only one item about willingness to invite someone with a mental illness to their home significantly improved post campaign [52]. One article (1/11, 9%) found desire for social distance increased slightly after the campaign in the UK [60].

Of the articles assessing desire for social distance in “campaign aware” individuals compared to “non-campaign aware” individuals, over half (7/12, 58%) found a reduced desire for social distance in those who were campaign aware [38, 39, 41, 44, 47, 55, 60] (Figure 3). Two articles (2/12, 17%) found no significant change [37, 54]. Three articles (3/12, 25%) reported mixed findings [35, 45, 53]. For example, Alvarado-Torres et al. found that actual behaviors related to social distancing, such as living with a person with a mental health condition, showed significant improvement, whereas intended behaviors, such as willingness to live with a person with a mental health condition, showed non-significant improvement [35]. In the earliest evaluation of the US *WhyWeRise* campaigns in, 2018, campaign awareness was associated with willingness to work closely with someone who has a serious mental illness but not moving next door to or socialising with such a person [45]. In the latest evaluation in 2022, campaign awareness was associated with less desire for social distance in adults but was not for young people[53].

Behavior change

Articles most commonly measured self-reported help-seeking intentions (6/12, 50%) [36, 43, 46, 52, 60, 62] or help-seeking actions, including service, website and helpline use that was mostly self-reported [24, 39, 53, 54, 61] (5/12, 42%). A third of articles (4/12, 33%) measured activities to enhance mental health [35, 40, 47, 55].

Of the articles measuring behavior change pre and post campaign, Booth et al. (1/8, 13%) showed a positive change at follow-up in service use [24] (Figure 2). Two articles (2/8, 25%) described mixed findings [46, 62]. Livingstone et al. found that the measurement item about ‘making an effort to learn about accessing mental health services’ was the only one to show significant improvement post campaign [46]. Thompson et al. found an increase in help-seeking intentions improved overall but African American respondents reported less improvement post campaign than White respondents [62]. Three articles (3/8, 38%) found no significant change in behavior (activities to enhance mental health) post campaign [47, 52, 55]. Two articles observed a decline post campaign in help-seeking

intentions, including intentions to visit a GP for mental health concerns and self-rated help-seeking and psychological wellbeing self-efficacy [43, 60].All the articles (12/12, 100%) measuring behavior change by campaign awareness found a positive association (Figure 3).

Discussion

Principal Results

Most studies evaluating social media-based mental health campaigns have used serial cross-sectional surveys to assess campaign effectiveness through measuring exposure, reach and engagement. Campaign awareness varied across campaigns and by demographic factors, including ethnicity, gender, age, and socioeconomic group. Younger people and females were most consistently reached by public mental health campaigns. Most articles measured changes in knowledge, stigma and attitudes, and over half of all articles reported on behavior change outcomes such as help-seeking. Stigma and attitudes towards mental health were found to improve most post campaign compared to pre campaign and behavior change outcomes showed the least improvement. However, post-campaign, those who were aware of campaigns were much more likely than those who were unaware to change their behaviors, such as seeking help for mental health concerns, engaging in activities for positive mental health and intending to seek help.

This review showed that mental health knowledge, stigma and attitudes generally improved before and after campaigns. These findings could reflect general societal shifts in these outcomes over the same period rather than be directly attributable to the campaigns. For example, many high-income countries have seen a general trend of reduced mental health stigma over the past 30 years, especially concerning common mental health problems like depression [63, 64]. However, some articles found that campaign awareness was associated with negative attitudes about mental health. These included believing that those who have had a mental illness will never contribute much to society, that a person with a mental illness is a danger to society and a desire to delay seeking mental health treatment out of fear of others finding out [37, 53, 54]. These findings came from the US *WhyWeRise*

campaign and it was suggested that the reasons for these attitudes could be due to the campaign inadvertently focusing more attention on some of the challenges that can be associated with mental health problems rather than empowerment [53]. Previous research also indicates that improving knowledge and awareness might not have long-lasting change on attitudes, stigma and behavior change [52, 65]. Furthermore, analysis of social and traditional media over the past 20 years has shown that the media generally has failed to move away from negative stereotypes, such as associating some mental health disorders with danger and fear [66, 67]. Although these campaigns likely aimed to challenge these perceptions, they seem to have not always succeeded in combating the stereotypes perpetuated by other media sources. Research suggests that future public mental health campaigns should move away from promoting a biomedical explanation of mental health problems that can perpetuate the othering of individuals affected by mental distress. Instead, campaigns should consider the public understanding of mental health and frame mental health problems as a response to social, economic, political and biological factors [65, 68]. Research on identifying effective and ineffective content and messaging strategies is crucial for framing campaigns appropriately and avoiding the perpetuation of negative stereotypes [69].

All evaluations that measured behavior change showed that those who were campaign aware were more likely to change their health behaviors after the campaigns than those who were unaware of the campaigns. These behaviors included self-reported intentions to seek help and engage in activities to enhance mental health but also objective measures, such as an increase in use of mental health outpatient service, helplines and websites. However, we cannot be certain the behavior changes were due to the campaigns, as they did not account for all confounding factors. For example, the campaign-aware group might have been more likely to seek help because they were experiencing more distress than those who were unaware of the campaigns. Additionally, when behavior change was measured before and after the campaigns few evaluations found any change in behaviors. In

some evaluations of UK campaigns, help-seeking intentions decreased, possibly due to increased difficulty accessing mental health care in many parts of the UK [43, 60, 70]. This suggests that being aware of campaigns may be key to achieving behavior change. However, these behavior changes tend not to be sustained and need to be supported by improved access to services. Individual behavior change alone is insufficient; changes in services are also necessary for a sustained impact on mental health. Fragmented systems and long waiting lists pose a barrier to behavior change, as they can inhibit opportunities, as suggested by the COM-B model, [25]. Public health campaigns alone cannot address these issues.

We found that campaign awareness across these social media campaigns was more common for younger age groups and females. This is likely partly because most social media users are younger and therefore more exposed to the campaigns. However, evidence suggests that globally males are more likely than females to use platforms like Facebook, which were utilised by many of the campaigns in this review [71]. It may be that more females are campaign aware because data show that this group have experienced the sharpest increases in mental health problems over the last 20 years in many high-income countries , so these campaigns are of more relevance to them and they are more aware [72-74]. However, there is a real need to reach young males, as they have significantly higher suicide rates compared to females [75]. Some articles also showed success at targeting populations who are unequally affected by mental health and/or have poor access to services, such as ethnic minorities and those in lower socioeconomic groups. However, the reach of campaigns was not reported in most articles, so it is unclear if they are reaching those who might benefit most and the extent to which they can address inequalities in mental health access and support. Campaigns that seemed to successfully target these populations were those that utilised different languages, popular sports teams, and mental health activists to share and create information [39, 53, 55]. One article found that there was less improvement in changes in attitudes and behaviors

post campaign in African American respondents compared to White respondents in the US, suggesting that some campaigns may have less positive impact on underserved groups. Future campaigns should leverage the benefits of social media to reach different underserved groups using content from influencers and activists popular with the target groups.

Limitations

This was a scoping review, so we have not assessed included articles for quality. However, this design was necessary to scope out what is known and what has been done in a short time period across a wide range of literature, to understand the effectiveness of social media-based public mental health campaigns. As we have only included studies written in English and focused on high-income settings, the findings of this review may not be generalisable to non-English speaking countries. We chose only to include studies from high-income countries to more easily compare campaigns across countries, but these findings may not be relevant to low-middle income countries. The field of social media research is expanding rapidly, and this scoping review only captures a snapshot of evidence related to social media campaigns across platforms that were most popular at the during the period 2008-2022. More recent campaigns will likely adapt their methods and messaging to newer platforms such as TikTok and this may prove to have a different impact on outcomes. All articles utilised cross-sectional surveys and had multiple campaign components, so it is not possible to know whether changes that occurred in the outcomes were caused by the social media campaigns or some other factor that changed over time. The articles that compared those who were campaign aware and not aware had issues with confounding variables, making it difficult to attribute changes solely to campaign awareness. Articles also assessed outcomes over varying lengths of time, and some used non-standardised measures of knowledge, attitudes, stigma, which makes it difficult to compare outcomes across campaigns. Many articles used self-report measures to evaluate behavior change, such as their intention to visit a mental health practitioner, so it may not reflect actual changes in behavior. The review was limited because it excluded qualitative studies that would have provided

deeper insights into how the campaign messaging is understood, which aspects are most impactful, and why some outcomes may be negative.

Conclusions

This scoping review underscores the potential of social media campaigns in improving knowledge, attitudes towards mental health, stigma and promoting help-seeking behavior. It highlights the potential importance of campaign awareness in contributing to behavior change and the need for more targeted campaigns to reach underserved communities, who may benefit from better mental health information, access to resources and a focus on empowerment. However, we still have questions regarding whether these social media campaigns achieve more than traditional media campaigns and if we are fully capitalising on their potential for extended reach. Future research should more consistently measure reach and behavior change outcomes to understand which groups benefit from these campaigns and how these campaigns affect help-seeking behaviors. Future campaigns need to consider how the public understand mental health, how to present information to not perpetuate mental health stigma and how campaigns could be designed to achieve sustained benefits. Furthermore, as the field of social media research continues to evolve rapidly, ongoing evaluation of new platforms and campaign strategies will be crucial to maximise the impact of these interventions on public mental health.

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Conflicts of Interest

None to declare.

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Abbreviations

COM-B: Capability, Opportunity, Motivation – Behavior change

CAMI: Community Attitudes to Mental Illness

MAKS: Mental Health Knowledge Schedule

MHL-REC: Mental Health Literacy—Knowledge for Recognition scale

MHL-ACT: Mental Health Literacy—Knowledge for Management scale

RIBS: Reported and Intended Behavior Scale

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[a] Insights, exposure, reach, and low-, medium-, and high-level engagement were measured using an adapted version of Neiger et al's key performance indicators and metrics related to social media use in health promotion.

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Supplementary Files

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Figures

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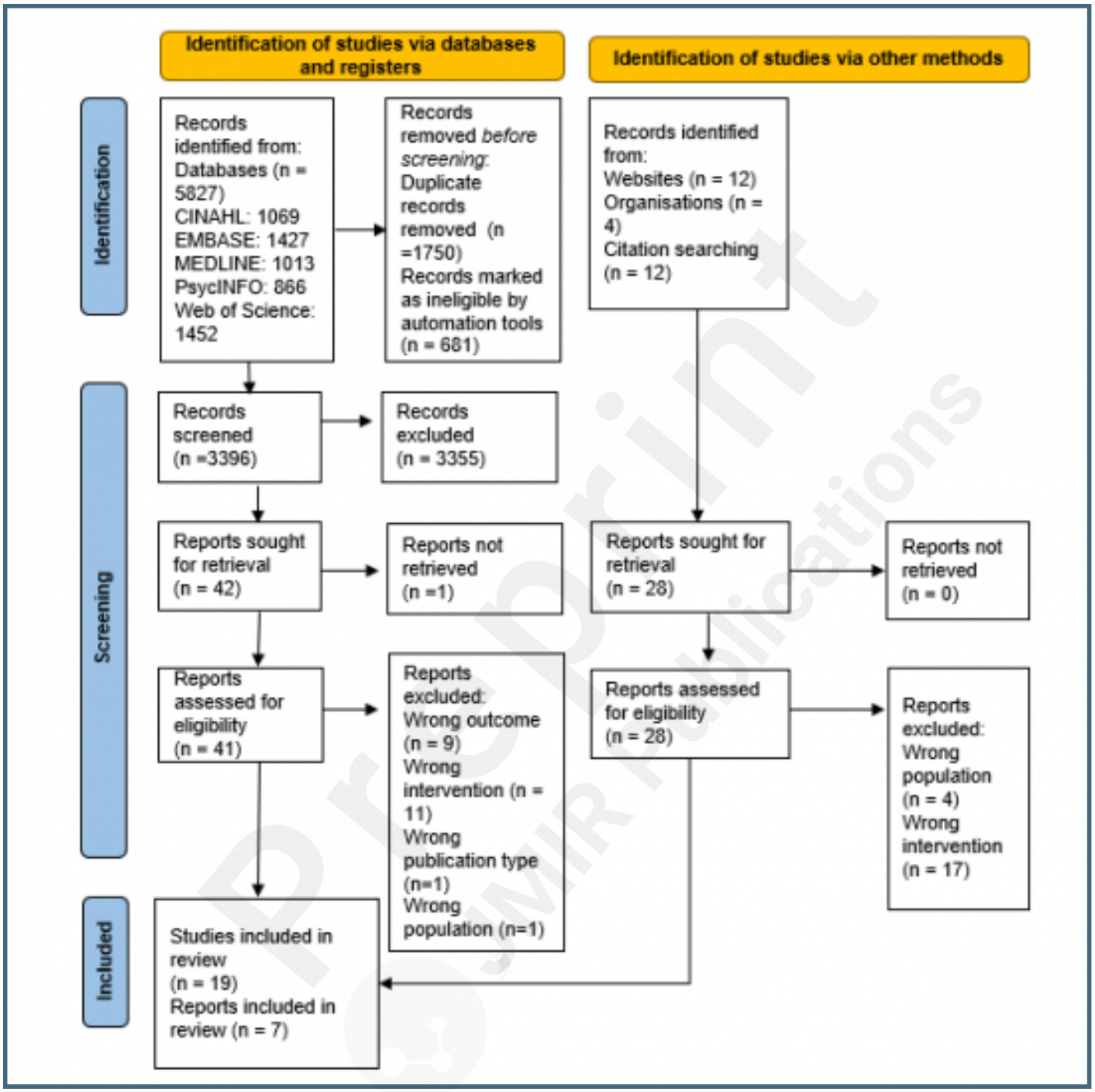
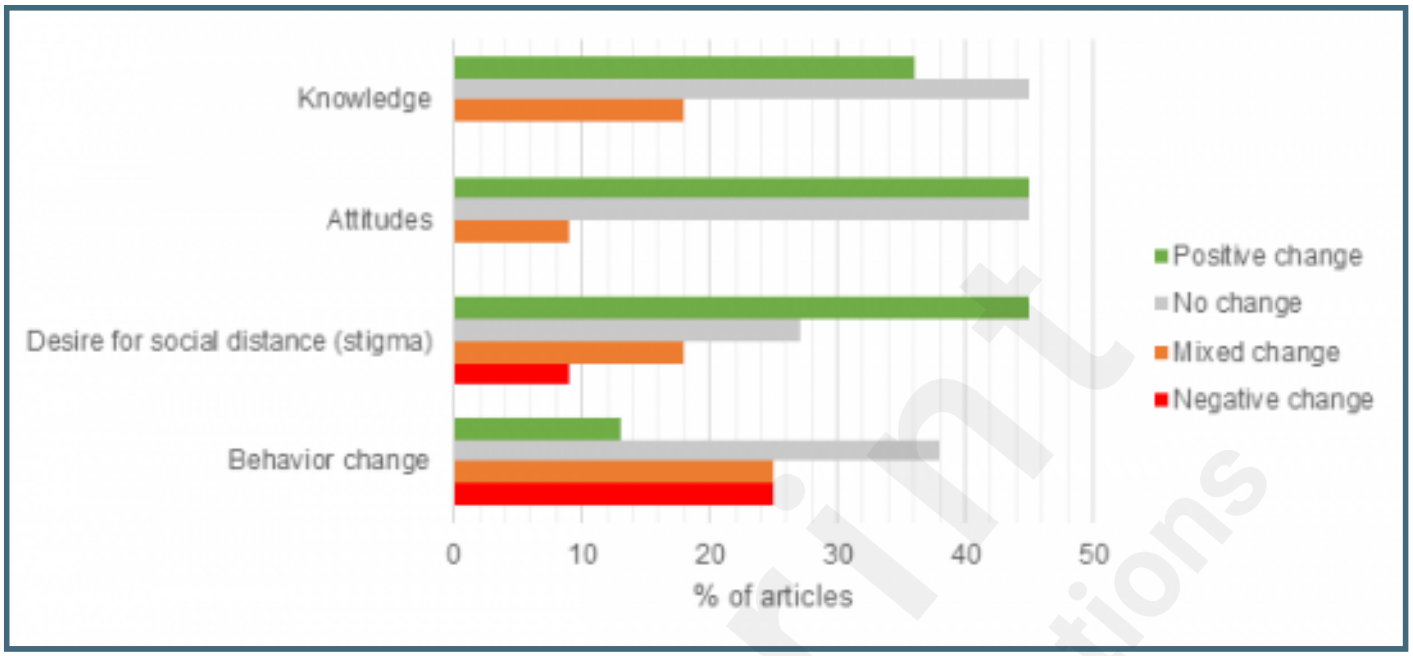
PRISMA flow diagram showing the process of inclusion and exclusion of sources.



Percentage of articles showing changes in knowledge, attitudes, stigma and behavior change before and after the social media campaigns.



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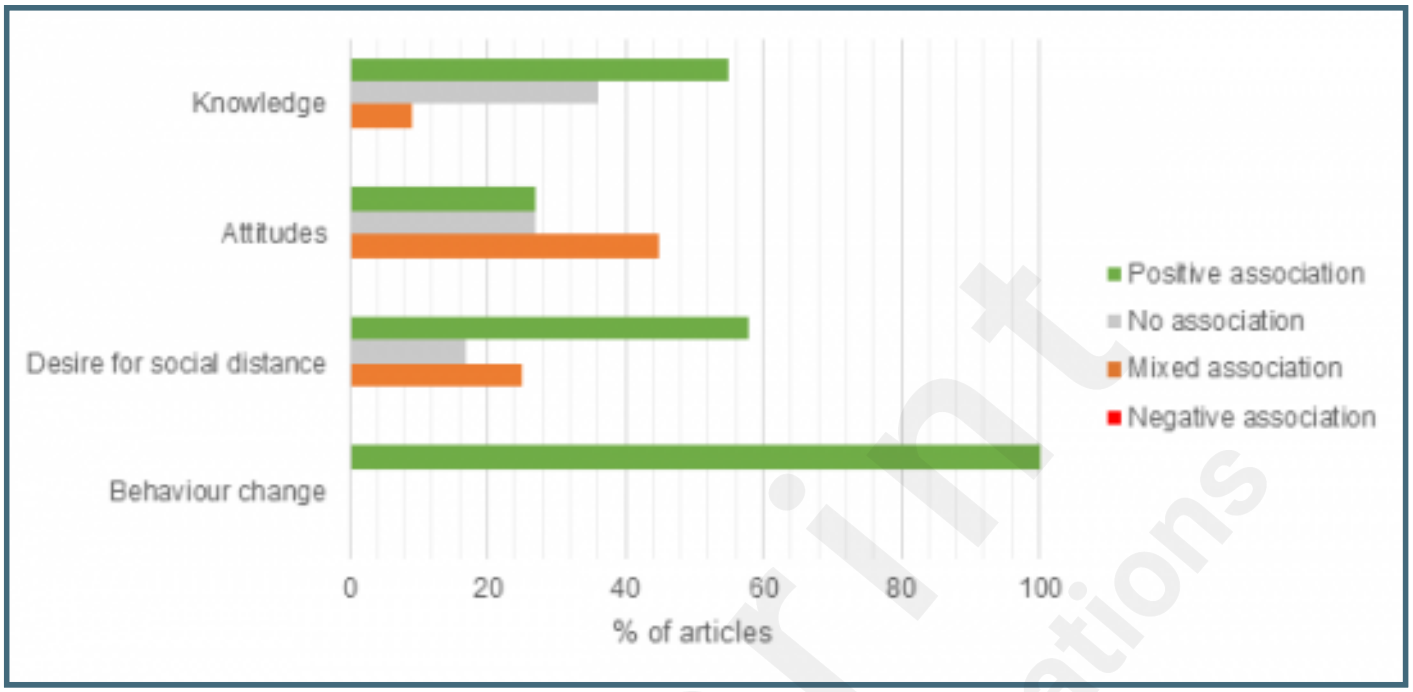
Percentage of articles presenting analyses showing the relationship between social media campaign awareness and knowledge, attitudes, stigma and behavior change.



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Multimedia Appendixes

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PRISMA Checklist.
URL: http://asset.jmir.pub/assets/82b63e56d467bd425e91100eac08043e.docx

Search Strategy for MEDLINE.
URL: http://asset.jmir.pub/assets/ff3735167b91b10f3b28e68ae127aef1.docx

Table of the key findings of campaign evaluations.
URL: http://asset.jmir.pub/assets/1a4071a4ba831df1254c4614a8458a55.docx

Summary of outcomes by campaigns.
URL: http://asset.jmir.pub/assets/da28414bab00150c55984d98f47c2b53.docx

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