A rapid review of the effectiveness of interventions to enhance equitable or overall access to mental health services by ethnic minority groups

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Abstract:
It is estimated that one in four people will experience poor mental health throughout their lifetime. However, ethnic minority groups, refugees and asylum seekers experience more barriers accessing mental health services and have poorer mental health outcomes than those from non-ethnic minority groups. Evidence suggests that interventions that improve access and engagement with mental health services may help reduce disparities affecting ethnic minority groups. This review aims to assess the effectiveness of interventions that enhance equitable or overall access to mental health services by ethnic minority groups.

The review included evidence available up until 19th December 2023.

Psycho-educational interventions that focused on providing culturally appropriate information, showed mixed results for help seeking behaviour, improvements in depressions stigma. Multi-component interventions within healthcare settings had mixed results. Some studies showed positive outcomes; such as increased help seeking intentions and improved attendance rates, while others did not show significant differences in outcomes. Interventions that included integrating specialist mental health services within primary care resulted in variable outcomes. The findings of interventions incorporating language support into mental health services were also variable. The effectiveness of interventions to enhance the cultural competency of mental health services varied across studies.

Research Implications and Evidence Gaps: Future research should prioritise rigorous study designs, including randomised controlled trials and longitudinal studies. More research is required to compare outcomes between ethnic minority participants and White participants.

Economic considerations: Ethnic minority individuals are disproportionately affected by economic determinants of poor mental health including increased likelihood of low income. Future research should investigate the economic benefit from an NHS and societal perspective of improving access to mental health services for ethnic minority individuals.

Funding statement:
The Centre for Health Economics and Medicines Evaluation, the Bangor Institute for Medical and Health Research, and the Swansea Centre for Health Economics were funded for this work by the Health and Care Research Wales Evidence Centre, itself funded by Health and Care Research Wales on behalf of Welsh Government

Health and Care Research Wales Evidence Centre

Canolfan Dystiolaeth Ymchwil Iechyd a Gofal Cymru

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May 2024

Ariennir gan Lywodraeth Cymru
Funded by Welsh Government

JBI
The Wales Centre For Evidence Based Care
A JBI Centre of Excellence

Uned Arbenigol ar Dystiolaeth Adolygu
SuRE
Specialist Unit for Review Evidence

Review conducted by the Cardiff Evidence Synthesis Collaborative

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Evidence need submitted to the Evidence Centre: May 2023

Initial Stakeholder Consultation Meeting: June 2023

Final Report issued: May 2024

The review should be cited as: Health and Care Research Wales Evidence Centre. A rapid review of the effectiveness of interventions to enhance equitable or overall access to mental health services by ethnic minority groups (RR0024). May 2024

Disclaimer: The views expressed in this publication are those of the authors, not necessarily Health and Care Research Wales. The Health and Care Research Wales Evidence Centre and authors of this work declare that they have no conflict of interest.

The effectiveness of interventions to enhance equitable or overall access to mental health services by ethnic minority groups: a Rapid Review

Report number: RR0024 (May 2024)

Executive Summary

What is a Rapid Review?

Our rapid reviews (RR) use a variation of the systematic review approach, abbreviating or omitting some components to generate the evidence to inform stakeholders promptly whilst maintaining attention to bias.

This report is linked to a Rapid Evidence Summary, published in February 2024 as "What works to support better access to mental health services (from primary care to inpatients) for minority groups to reduce inequalities?"

Who is this Rapid Review for?

This Rapid Review was conducted on request from the Health and Social Services Group in Welsh Government - Mental Health & Vulnerable Groups (Policy). It is intended for policy makers but could also be of use for mental health practitioners, healthcare providers, and third sector organisations.

Background / Aim of Rapid Review

It is estimated that one in four people will experience poor mental health throughout their lifetime. Evidence suggests that interventions that improve access and engagement with mental health services may help reduce disparities affecting ethnic minority groups. This review aims to assess the effectiveness of interventions that enhance equitable or overall access to mental health services by ethnic minority groups.

Results

Recency of the evidence base

- The review included evidence available up until 19th December 2023.

Extent of the evidence base

- 14 studies (published across 17 reports) described 14 unique interventions including four randomised control trials, four quasi-experimental studies, and six non-experimental studies.
- The majority of studies (nine) were conducted in the USA, and five from the UK.
- Interventions were categorised according to whether they aimed to instigate change at an individual, intrapersonal, community or organisational levels.
- The majority of interventions were multi-component incorporating a variety of different elements such as culturally appropriate information, enhancing the cultural competency of health care professionals and services, incorporating language support
- Studies included diverse ethnic groups as well as specific ethnic populations. Participant ethnicity included:
  - Asian, Black and Ethnic Minorities, Black/African American (number of studies, n=8)
  - Pakistani, South Asian, Latinx, Chinese American, African American and Hispanic (n=6).
- Participants included those with specific mental health conditions, for example behavioural problems, depression, post-partum depression (n=3); any mental health condition such as anxiety or depression (n=5); healthy participants (n=4); participants referred for Improving Access to Psychological Therapy (n=1); and those in mental health crisis (n=1).
- Outcomes included: help seeking intentions, screening, initial and/or attendance, referrals, treatment module completion, service use and clinical outcomes.

- Five studies compared outcomes between ethnic minority and white participants.

Key findings and certainty of the evidence

- **Psycho-educational interventions** that focused on providing culturally appropriate information, utilising leaflets, videos, or lecture style presentation showed mixed results for help seeking behaviour, improvements in depressions stigma and no effect on initial attendance but improved ongoing attendance (Limited evidence).
- **Multi-component interventions** conducted within healthcare settings that **included verbal information** (including consultations) had mixed results. Some studies showed positive outcomes such as increased help seeking intentions and improved initial and ongoing attendance rates while others did not show significant differences in outcomes compared to control groups (Limited evidence).
- Interventions that included **integrating specialist mental health services within primary care** resulted in variable outcomes with attendance rates influenced by ethnicity and limited impact on levels of anxiety and depression (Fair level of evidence).
- The findings of interventions incorporating **language support into mental health services** were variable. Some studies showed positive outcomes such as increased intention to seek help or improved attendance and treatment response when provided in the patient's preferred language, while others did not show significant differences in outcomes compared to control groups (Limited evidence).
- The effectiveness of interventions to **enhance the cultural competency of mental health services** varied across studies. Some interventions demonstrated positive outcomes, such as reduced depression stigma or improved attendance and treatment response when services were provided in Spanish, others did not show significant impacts on attendance or clinical outcomes (Limited evidence).

Research Implications and Evidence Gaps

- Future research should prioritise rigorous study designs, including randomised controlled trials and longitudinal studies.
- More research is required to compare outcomes between ethnic minority participants and White participants.

Policy and Practice Implications

In summary, the findings support the following:

- Psycho-educational interventions that utilise culturally appropriate delivery methods, such as leaflets, videos, or lectures to encourage health seeking behaviour amongst ethnic minority groups.
- The integration of speciality mental health services within primary care setting.
- The implementation of language support such as the use of professional interpreters to improve the accessibility for individuals with limited English proficiency.
- The provision of training to emphasise cultural sensitivity and competence among healthcare providers to address disparities in mental healthcare access and outcomes.

Economic considerations

- Ethnic minority individuals are disproportionately affected by economic determinants of poor mental health including increased likelihood of low income.
- Future research should investigate the economic benefit from an NHS and societal perspective of improving access to mental health services for ethnic minority individuals.

The certainty of evidence has been assessed using the Strength of evidence approach by the Academy of Nutrition and Dietetics (https://www.andeal.org/evidence-analysis-manual)

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Abbreviations

Acronym	Full Description
aOR	Adjusted Odds Ratio
aHR	Adjusted Hazard Ratio
aIRR	Adjusted Incident Rate Ratio
CAMHS	Child and Adolescent Mental Health Services
CG	Control group
CI	Confidence interval
GP	General practitioner
IAPT	Improving Access to Psychological Therapy
IG	Intervention group
IRR	Incident Rate Ratio
OR	Odds Ratio
QCC	Quality Criteria Checklist
RCT	Randomised Controlled Trial
SD	Standard Deviation
SE	Standard Error

Glossary

Disparity: "Health disparity and health inequality are broad terms that include health inequity and signify more than just difference or variation: they signify a health difference that raises moral or ethical concerns." (Braveman et al. 2018, p.11)

Equity: Health equity means that "everyone has a fair and just opportunity to be as healthy as possible. Achieving health equity requires removing obstacles to health such as poverty, discrimination, and their consequences, which include powerlessness and lack of access to good jobs with fair pay; quality education, housing, and health care; and safe environments. For the purposes of measurement, health equity means reducing and ultimately eliminating disparities in health and health determinants that adversely affect excluded or marginalized groups. Health equity is the ethical and human rights principle motivating efforts to eliminate health disparities; health disparities are the metric for assessing progress toward health equity." (Braveman et al. 2018, p. 11)

Ethnic minorities: refers to all ethnic groups except the White British group. Ethnic minorities include white minorities, such as Gypsy, Roma and Irish Traveller groups. (UK Government 2023)

Mental health: Welsh Government defines mental health (in the draft Mental Health and Wellbeing Strategy – out to consultation February to June 2024) as a state of mental wellbeing that enables people to cope with the stresses of life, realise their abilities, learn well and work well, and contribute to their community. It is an integral component of health and wellbeing that underpins our individual and collective abilities to make decisions, build relationships and shape the world we live in. Mental health is a basic human right. And it is crucial to personal, community and socio-economic development. People with poor mental health can have a mental health condition but this is not always or necessarily the case.

Mental health condition: Welsh Government defines mental health condition (in the draft Mental Health and Wellbeing Strategy – out to consultation February to June 2024) as a broad

term covering conditions that affect emotions, thinking and behaviour, and which substantially interfere with our life. Mental health conditions can significantly impact daily living, including our ability to work, care for ourselves and our family, and our ability to relate and interact with others. This is a term used to cover several conditions (e.g. depression, post-traumatic stress disorder, schizophrenia) with different symptoms and impacts for varying lengths of time, for each person. Mental health conditions can range from mild through to severe and enduring illness. People with mental health conditions are more likely to experience lower levels of physical and mental wellbeing, but this is not always or necessarily the case. Some mental health conditions like eating disorders and schizophrenia are associated with a higher risk of mortality.

1. BACKGROUND

1.1 Who is this review for?

This rapid review was conducted as part of the Health and Care Research Wales Evidence Centre Work Programme. The above question was suggested by Health and Social Services Group Welsh Government - Mental Health & Vulnerable Groups (Policy). This rapid review is intended for policy makers but could also be of use for mental health practitioners, healthcare providers, and third sector organisations.

1.2 Background and purpose of this review

It is estimated that one in four people will experience poor mental health[1] throughout their lifetime (Centre for Mental Health 2020). Evidence suggests that ethnic minority groups[1] experience inequalities in access, experience and outcomes of mental health care (Lowther-Payne et al. 2023, Bansal et al. 2022). At the same time, these groups are at higher risk of mental health conditions[1] and this risk is often associated with being disproportionally impacted by detrimental social factors, such as racism and poverty (Bignall et al. 2019).

Wales is home for diverse ethnic minority groups, including approximately 89,000 people who identify as Asian, Asian British or Asian Welsh, 28,000 Black, Black British, Black Welsh, Caribbean or African individuals, 49,000 mixed or multiple ethnic people, 26,000 members of other ethnic groups (ONS 2022), and 3,630 Gypsy and Irish Traveller residents (ONS 2023). Together for Mental Health, the Welsh Government's mental health strategy has highlighted the need to consider equality since 2012 (Welsh Government 2012). However, the equality impact assessment of this strategy found that since the publication of Together for Mental Health, stigma and discrimination were still more prevalent for people with protected characteristics, including ethnic minority groups (Welsh Government 2014). In addition, the COVID-19 pandemic highlighted systemic issues, and disproportionately affected ethnic minority groups, prompting the Welsh Government to focus more on reducing health inequalities in their Together for Mental Health updated Delivery Plan (Welsh Government 2020). A recently published research review of the Together for Mental Health Delivery Plan acknowledged that ethnic minority groups in Wales had poorer mental health outcomes than the wider public while identifying potential barriers to access and service provision (Lock et al. 2023). Improvement in the cultural competency of mental health services and providers in Wales was identified as necessary to help the engagement of ethnic minority groups (Lock et al. 2023). Additionally, issues with multi-lingual service provision in common international languages was also mentioned in the report, which could negatively impact on help seeking for members of ethnic minority groups who can discuss their condition better in a language other than English (Lock et al. 2023). Welsh Government is currently consulting on a new Mental Health and Wellbeing Strategy for Wales. The draft strategy sets out ten overarching principles – one of which is equity of access, experience and outcomes without discrimination: ensuring services and support are accessible and appropriate for all. This means understanding the barriers people face and putting necessary systems in place so that when people get support, there is equity in terms of experiences and outcomes. To achieve this, support and services will need to be culturally and age appropriate and meet the needs of Welsh speakers, ethnic minority people, LGBTQ+ communities and people with sensory loss.

[1] Defined in the Glossary

Services will also need to meet the needs of under-served groups such as people with co-occurring substance misuse, people who are care experienced, neurodivergent people and people who are experiencing poverty and people who are experiencing homelessness.

Evidence from the wider international literature also suggests that disparities[1] in ethnic minority groups' engagement with mental health services exist along the entire care pathway, with them being less likely to initiate mental health care and more likely to end treatment early (Aggarwal et al. 2016, Interian et al. 2013). These disparities are linked to various individual, organisational, and systemic barriers (Aggarwal et al. 2016). Individual-level barriers may include insufficient information to make treatment decisions, communication difficulties and linguistic issues, lack of trust in service providers, psychological distress, fear of stigma, and cultural beliefs resulting in feeling shame about seeking mental health support. Organisational-level barriers refer to unequal access to services and lack of cultural competence in service providers. The systemic level includes poor funding of mental health services and inaccessibility of information about available services as well as broader issues such as lack of access to transportation or childcare necessary to attend mental health services (Aggarwal et al. 2016).

To improve ethnic minority groups' access to mental health services in Wales, a Mental Health Ethnic Minorities Task and Finish Group – jointly chaired by Welsh Government and the Wales Alliance for Mental Health was set up as part of the Anti-Racist Wales Action Plan (Welsh Government 2022). Moreover, suggestions were made that the new mental health strategy should be developed with the involvement of community organisations, the third sector and the NHS to make sure that the needs and experiences of ethnic minority groups are considered (Welsh Government 2022). To support these plans, it is also crucial to know what evidence is available on interventions that could support equitable[2] or overall access to mental health services by ethnic minority groups. It is thought that effective interventions to improve access and engagement with services may reduce disparities (Interian et al. 2013). Preliminary work for this review looking at the wider evidence base has been published as a separate Rapid Evidence Summary.

2. RESULTS

This section details the extent of the evidence base and findings of the included research reporting on effectiveness of interventions to enhance equitable or overall access to mental health services by ethnic minority groups.

The overview of the evidence base (section 2.1) provides a description of the characteristics of the available evidence, including participants (age, gender, ethnic minority groups, mental health conditions), study design, country of origin of the research, interventions, settings and outcome/s of interest. A summary of the findings of the included studies is presented in section 2.2, which is structured around the type of intervention, type of outcomes measures (help seeking intentions, screening, initial attendance, ongoing attendance, referrals, service use and clinical outcomes), and target population characteristics.

A summary of the interventions included in the review is provided in Table 1, and a summary of the findings and the effectiveness of each intervention is provided in Table 2. Table 3

[2] Defined in the Glossary

provides a summary of the strength of the evidence and assigns a Grade to indicate whether this was Good, Fair or Limited.

The methods used for this rapid review are described in Section 5. This includes the eligibility criteria, which can be found in section 5.1 (Table 4); and the individual elements incorporated in the assessment of the strength of the evidence, which can be found in Section 5.7 (Table 5).

2.1 Overview of the Evidence Base

The searches identified 3,451 records and after deduplication there were 1,721 records. Following title and abstract screening there were 66 records of which the full papers were retrieved and assessed for inclusion. Fifteen records were found to be relevant and citation searching of these records identified two additional records. Fourteen studies, consisting of seventeen reports[3,4] were included in this review.

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Interventions and settings

The 14 studies describe 14 unique interventions delivered by either the research team (n=3), mental health practitioners (n=10) and the co-author of the research report (n=1). To organise the various interventions in a meaningful way an adapted version of the social ecological model (CDC 2022) was used as a framework to identify the levels (individual, intrapersonal, community and organisational) at which interventions aimed to instigate change.

A summary of the included interventions is provided in Table 1. A more detailed summary of the interventions evaluated by each included study is also provided in Table 6. (Characteristics of included studies).

Interventions that focused on instigating change at the *level of the individual* include:

- Implementing psycho-educational programs to promote psychotherapy entry and attendance among older African Americans (Alvidrez et al 2005).
- Psycho-educational videos to increase help seeking intentions around addressing difficulties coping with depressive symptoms for adolescent from ethnic minority groups (Martin et al. 2022).
- Patient education DVD and bilingual leaflet about dementia and getting help for memory symptoms for South Asian adults without known dementia aged >50 years (Mukadam 2017; Mukadam et al. 2018).
- Psycho-educational intervention to increase awareness of mental health issues and available resources among elderly Chinese Americans (Teng and Friedman 2009).

Interventions that focused on instigating change at the *organisational level* include:

- Integrating mental health and substance abuse services into primary care settings for older adults (> 65 years) from ethnic minority groups (Arean et al. 2008, Ayalon et al. 2007).

[3] Integrating mental health and substance abuse services in primary care reported across three studies – Arean et al. 2008, Ayalon et al. 2007 and Levkoff et al. 2004 and referred to as Arean et al. 2008 through this report.

[4] Educational leaflet and DVD about dementia and getting help for memory symptoms reported across Mukadam et al. 2018 and Mukadam 2017 and referred to as Mukadam 2017.

- Placing mental health link workers in GP surgeries to increase referrals of Black and Minority Ethnic individuals to the IAPT (Improving Access to Psychological Therapies) programme (Evans et al. 2014).
- Routine depression screening by medical assistants across ethnic minority groups (Gorman et al. 2021).

Interventions that focused on instigating change across multiple levels include:

Interpersonal and organisational levels Interventions:

- Client-clinician ethnic and language matching for White and Hispanic homeless clients with severe mental illness in ongoing community treatment (Ortega and Rosenheck 2002).
- Psychiatry and primary healthcare service integration for Chinese American adults (Yeung et al. 2004).

Community and organisational levels Interventions:

- Enhancing Pathways into Care project: information provision, community engagement; link worker and more appropriate and responsive services for those from the Pakistani community in mental health crisis (Hackett et al. 2009).
- Providing postpartum depression screening and referral to behavioural services by community health workers for Latinx immigrant mothers (Robidoux et al. 2023).

Individual and organisational levels Interventions:

- Patient education and health care professional training to facilitate access to dementia screening and diagnosis for older Asians (Seabrooke and Milne 2009)

Individual, interpersonal and organisation levels Interventions:

- Pre-intake intervention designed to enhance initial engagement at Child and Adolescent Mental Health Services (CAMHS) targeted at primary parental caregivers of all children and adolescents from black and minority ethnic groups referred and accepted into CAMHS (Michelson and Day 2014).
- Conducting person-centred cultural assessments with primary caregivers of children aged 2-7 from ethnic minority groups experiencing behaviour problems (Sanchez et al. 2022).

Seven of the interventions were conducted within primary care settings (Arean et al. 2008, Evans et al. 2014; Gorman et al. 2021, Mukadam 2017, Seabrooke and Milne 2009, Yeung et al 2004, Robidoux et al 2023); five within secondary care, specifically in community based or outpatient mental health services (Alvidrez et al 2005, Ortega and Rosenheck 2002); in Child and Adolescent Mental Health Services (Michelson and Day 2014, Sanchez et al 2022) or crisis or home treatment teams (Hackett at al 2009). One study reported that the study author delivered the intervention which consisted of a one-hour educational presentation at a faith-based organisation, but no further detail was provided (Teng and Friedman 2009). In the study by Martin et al. (2022) the participants were recruited by researchers from a crowd sourcing platform.

The mode of delivery was face to face for 11 studies (Alvidrez et al 2005, Arean et al. 2008, Evans et al 2014, Gorman et al 2021, Hackett et al. 2009, Martin et al. 2022, Ortega and Rosenheck 2002, Robidoux et al. 2023, Sanchez et al. 2022, Teng and Friedman 2009, Yeung

et al. 2004), via telephone for one study (Michelson and Day 2014 and two studies sent information sent out in the post (Mukadam et al. 2018 and Seabrooke and Milne 2009).

Participants

The number of participants in each study ranged from 23 (Evans et al. 2014) to 21,377 (Gorman et al. 2021). Ten studies focused on adults (Alvidrez et al. 2005, Arean et al. 2008; Evans et al. 2014; Gorman et al. 2021, Hackett et al. 2009; Mukadam et al. 2018, Ortega and Rosenheck 2002, Seabrooke and Milne 2009, Teng and Friedman 2009 ;Yeung et al. 2004), one on new mothers (Robidoux et al. 2023), two on caregivers of children, with children as the target population for accessing services (Michelson and Day 2014, Sanchez et al. 2022), and one on adolescents (Martin et al. 2022).

Four studies described the population group as being older adults (Alvidrez et al. 2005; Arean et al. 2008; Seabrooke and Milne 2009; Teng and Friedman 2009). The mean age of participants was reported by 10 studies though one only reported the age of the child being cared for (Michelson and Day 2014). In the nine other studies, the mean age ranged from 16.8 years old (Martin et al. 2022) to 74 years old (Teng and Friedman 2009, Alvidrez et al. 2005). Gender was reported across 11 studies and the percentage of participants who were female ranged from 9.4% (Ortega and Rosenheck 2002) to 100% (Robidoux et al. 2023).

Ethnic minority groups

Six studies included participants from specific ethnic minority groups - Pakistani (Hackett et al. 2009) South Asian (Mukadam 2017); Latina (Robidoux et al. 2023); Chinese American (Teng and Friedman 2009; Yeung et al. 2004); African American (Alvidrez et al. 2005); Hispanic (Ortega and Rosenheck 2002) The remaining eight studies included participants from a variety of ethnic minority groups (Arean et al. 2008; Evans et al. 2014; Gorman et al. 2021; Hackett et al. 2009; Martin et al. 2022; Michelson and Day 2014; Sanchez et al. 2022; Seabrooke and Milne 2009) and the details are presented as described by the study authors.

- Asian (4 studies): Arean et al. 2008; Gorman et al. 2021; Sanchez et al. 2022; Seabrooke and Milne 2009.
- Black and minority ethnic (2 studies): Evans et al. 2014; Michelson and Day 2014.
- Black/African American (5 studies): Arean et al. 2008; Gorman et al. 2021; Martin et al. 2022; Sanchez et al. 2022.
- American Indian (1 study): Sanchez et al. 2022.
- Latino or Hispanic (2 studies): Arean et al. 2008; Sanchez et al. 2022.
- Haitian (1 study): Sanchez et al. 2022.
- Bi/multiracial (1 study): Sanchez et al. 2022.

Mental health conditions

Six studies focused on participants with various mental health conditions as follows:

- Anxiety (3 studies): Arean et al. 2008; Michelson and Day 2014; Yeung et al. 2004.
- Depression (4 studies): Arean et al. 2008; Martin et al. 2022; Ortega and Rosenheck 2002; Yeung et al. 2004.
- Psychotic symptoms or disorders (2 studies): Michelson and Day 2014; Ortega and Rosenheck 2002.
- Psychiatric problems (1 study): Ortega and Rosenheck 2002.
- Mood disorders (2 studies): Alvidez et al. 2005; Michelson and Day 2014.
- Developmental disorders (1 study): Michelson and Day 2014.

- Emotional and behavioural disorders of childhood (1 study): Michelson and Day 2014.
- Other mental health issues (1 study): Yeung et al. 2004.

Three studies focused on specific mental health conditions which were behaviour problems (Sanchez et al. 2022), dementia (Mukadam 2017) and post-partum depression (Robidoux et al. 2023). Two further studies did not provide specific details of the mental health conditions of the participants who were described as those referred for Improving Access to Psychological Therapy (Evans et al. 2014) or those experiencing mental health crisis (Hackett at al. 2009).

A further four studies included healthy participants being screened for depression (Gorman et al. 2021), help seeking intentions around depression (Martin et al. 2018); raising awareness of mental health issues (Teng and Friedman 2009) and raising awareness of dementia and memory problems (Seabrooke and Milne 2009).

Study design
There were eight experimental studies (Alvidrez et al. 2005; Arean et al. 2008; Evans et al. 2014; Gorman et al 2021; Martin et al. 2022; Michelson and Day 2014; Mukadam 2017, Sanchez et al. 2022). Of these four were randomised controlled trials (Arean et al. 2008; Martin et al. 2022; Mukadam 2017; Sanchez et al. 2022) and four were quasi-experimental studies (Alvidrez et al. 2005, Evans et al. 2014; Gorman et al. 2021, Michelson and Day 2014). There were six non-experimental studies (Hackett et al. 2009; Ortega & Rosenheck 2002; Robidoux et al. 2023; Teng and Friedman 2009, Seabrooke and Milne 2009; Yeung et al. 2004). For further detail see Section 6.2.

County of origin
Nine studies originated from USA (Alvidrez et al. 2005, Arean et al. 2008, Gorman et al 2021 Sanchez et al. 2022, Martin et al. 2022, Teng and Friedman 2009, Yeung et al 2004, Ortega and Rosenheck 2002, Robidoux et al. 2023) and five from UK (Evans et al. 2014, Michelson and Day 2014. Mukadam 2017, Seabrooke and Milne 2009, and Hackett et al. 2009).

Outcomes
The 14 studies reported a total of 40 relevant outcomes. These were grouped in to seven categories: help seeking intentions (Martin et al, 2022; Mukadam et al. 2018; Teng and Friedman 2009), screening (Gorman et al. 2021; Robidoux et al. 2023), initial attendance (Alvidrez et al. 2005, Arean et al. 2008, Michelson and Day 2014, Sanchez et al. 2022, Seabrooke and Milne 2009, and Yeung et al. 2004), ongoing attendance (Alvidrez et al. 2005, Arean et al. 2008, Michelson and Day 2014, Sanchez et al. 2022.), referrals (Yeung et al. 2004, Seabrooke and Milne 2009, Evans et al. 2014, Hackett et al. 2009, Robidoux et al. 2023), service use (Hackett et al. 2009; Ortega and Rosenheck 2002; Sanchez et al. 2022) and clinical outcomes (Arean et al. 2008, Ortega and Rosenheck 2002, Sanchez et al. 2022).

Outcomes that were categorised as screening were:
- Rates of depression screening (Gorman et al 2021).
- Screening rate of eligible postpartum mothers (Robidoux et al. 2023).

Outcomes that were categorised as referrals were:
- Number of referrals to secondary care (Seabrooke and Milne 2009).
- Primary care patients referred to mental health service (Yeung et al 2004).

- Referral rate for patients that screened positive (Robidoux et al. 2023).
- Referral rates for IAPT (Evans et al. 2014).
- % referrals to crisis resolution home treatment or inpatient ward (Hackett et al. 2009).

Outcomes that were categorised as help seeking intentions were:

- Attitudes to help-seeking for memory problems (Mukadam et al. 2018).
- Help seeking preference for physical and psychiatric symptoms (Teng and Friedman 2009).
- Help-seeking intentions (Martin et al. 2022).
- Depression stigma[5] (Martin et al. 2022).

Outcomes that were concerned with initial attendance were:

- Proportion of patients starting therapy (Alvidrez et al. 2005).
- Attendance at first appointment (did not attend, attended, cancelled) (Michelson and Day 2014).
- Initial treatment session and attendance (Sanchez et al. 2022).
- Show-up rate for initial evaluation (Yeung et al 2004).
- Estimated number of time (days) to the first visit of any type (Arean et al. 2008).
- % subjects having at least one mental health visit (Arean et al. 2008).
- Presenting to the GP with memory problems in older Asians (Seabrooke and Milne 2009).

Outcomes that were categorised as ongoing attendance were:

- Attendance within first three appointments (did not attend, attended, cancelled) (Michelson and Day 2014).
- Number of sessions attended over 3 months (Alvidrez et al. 2005).
- Weekly session attendance rates (Sanchez et al. 2022).
- Average number of visits (Mean) (Arean et al. 2008).

Outcomes that were categorised as service use were:

- Medical-surgical services use, outpatient psychiatric service use and substance abuse services use (Ortega and Rosenheck 2002).
- Percentage service use (home treatment, by British/Asian Pakistani; Hackett et al. 2009).
- Number and proportional percentages of admissions (Hackett et al. 2009).
- Average length of stay (Hackett et al. 2009).
- Total services used (Ortega and Rosenheck 2002).
- Completion of first treatment module (Sanchez et al. 2022).

Clinical outcomes reported in the studies were:

- Depression scores (Ortega and Rosenheck 2002).
- Psychiatric problems (Ortega and Rosenheck 2002).
- Psychosis symptoms (Ortega and Rosenheck 2002).

[5] Surrogate outcome for help seeking.

- Anxiety (Arean et al. 2008).
- Depression (Arean et al. 2008).
- Treatment response (child behaviour problems dropped into the subclinical range (Sanchez et al. 2022).

Additionally, five studies compared the results of the ethnic minority participants with White participants (Arean et al. 2008; Gorman et al.2021; Martin et al. 2022; Michelson and Day 2014; Ortega and Rosenheck 2002) across a range of outcomes.

Methodological quality

The quality of the included studies was assessed using the Academy of Nutrition and Dietetics Quality Criteria Checklist (QCC) (Academy of Nutrition and Dietetics 2022). The results are summarised in Table 7. Only two studies (Arean et al. 2008; Gorman et al. 2021) were rated as high quality and four studies (Hackett et al. 2009; Robidoux et al. 2023; Seabrooke & Milne 2009; Teng and Friedman 2009) were rated as low quality. The remaining eight studies (Alvidrez et al. 2005; Evans et al. 2014; Martin et al 2022; Michelson and Day 2014; Mukadam et al. 2018; Ortega and Rosenheck; Sanchez et al. 2022; Yeung et al 2004) were rated as medium quality.

Table 1: Summary of interventions evaluated by included studies and type of comparison made

Authors/ year (country) Study design Name and type of intervention/control	Mode of delivery and duration/intensity	Data analysis
Interventions focusing on change at the individual level		
Alvidrez et al. 2005 (USA) **Study design** Cross-sectional post-test only quasi-experimental **Intervention** Psycho-educational to promote psychotherapy entry and attendance for older African Americans **Comparison** Historical comparison group Referred for psychotherapy in the 12 months prior to the intervention	**Mode of delivery** Delivered by researchers Face to face psycho-education sessions **Duration** Intervention: 15-minute scripted psycho-education session before the day of their first scheduled psychotherapy appointment covering six topics Study duration: 14 months	**Data analysis** Treatment entry and attendance, the impact of psycho educator ethnicity (African American or other) on treatment entry and attendance were compared between the pre-implementation and post-implementation period
Martin et al. 2022 (USA) **Study design** RCT **Intervention** Psycho-educational intervention to increase help seeking intentions around addressing difficulties coping with depressive symptoms for adolescents from ethnic minority groups **Control** Control video	**Mode of delivery** Delivered by researchers Face to face - short video interviews with a 16-year-old Black female actor Video 1 (“Depressed”): The videos address difficulties coping with depressive symptoms, thoughts that life is not worth living, false assumptions about treatment, and how and when she decided to seek help Video 2 (“Depressed adjusted”): is adjusted to aspects unique to being a Black adolescent girl (e.g., experienced or internalised racism) Video 3 (control): describes hobbies and lacks the description of depressive symptoms or any other mental health–related content **Duration** Intervention: 117 seconds long and were administered once Study duration: not reported	**Data analysis** Depression stigma and help seeking intention were compared between baseline and post intervention, and across the groups receiving different psycho-educational videos (1, 2 and control) Depression stigma for Black participants were also analysed relative to non-Black participants

Mukadam et al. 2018 (UK) **Study design** Cluster RCT **Intervention** Patient education DVD and bilingual leaflet about dementia and getting help for memory symptoms for South Asian adults without known dementia aged >50 years **Control** No DVD/leaflet information sent	**Mode of delivery** Delivered by researchers Leaflet and DVD sent out in the post with a letter on headed paper from the practice **Duration** Intervention: not reported Study duration: 1 year	**Data analysis** Help seeking intention (based on the APEND questionnaire) was compared between intervention (patient education DVD and leaflet) and control (no DVD and leaflet)
Teng and Friedman 2009 (USA) **Study design** Longitudinal pre-post non-experimental **Intervention** Psycho-educational intervention to increase awareness of mental health issues and available resources among elderly Chinese Americans	**Mode of delivery** Delivered by the co-author of the research report and no further details Provided through a faith based organisation Face to face - didactic presentation delivered in English/Mandarin **Duration** Intervention: 1 hour Study duration: not reported	**Data analysis** Help seeking intentions for psychiatric symptoms were compared immediately before and after the intervention
Interventions focusing on change at the organisational level		
Arean et al. 2008 (USA) **Study design** RCT **Intervention** Integrating mental health and substance abuse services into primary care settings for older adults (> 65 years) from ethnic minority groups **Control** Referral to community services	**Mode of delivery** Delivered by practitioners within the primary care setting Face to face evaluation and subsequent referral to primary care clinic or community services **Duration** Intervention: not reported Study duration: not reported	**Data analysis** Percentage of having at least one mental health visit, average number of visits, estimated number of days to first visit, anxiety and depression scores were compared between intervention (integrated care) and control (speciality mental health care) for different ethnicities Outcomes for different ethnicities were also analysed relative to white participants
Evans et al 2014 (UK) **Study design** Cross-sectional post-test only quasi-experimental	**Mode of delivery:** Delivered by practitioners within the primary care setting	**Data analysis** Referral rates were descriptively compared between GP services with and without a link worker

Intervention Placing mental health link workers in GP surgeries to increase Black and Minority Ethnic referrals to the IAPT programme **Control** GP surgeries without link workers	Face to face explanation of psychological therapy and raising awareness of common mental disorders in Black and Minority Ethnic groups **Duration:** Intervention: not reported Study duration=Approx. 17 months	
Gorman et al 2021 (USA) **Study design** Cross-sectional post-test only quasi-experimental **Intervention** Routine depression screening by medical assistants across ethnic minority groups **Comparison:** Routine depression screening by physicians in the 12 months prior to the intervention (historical comparison group)	**Mode of delivery** Delivered by practitioners within the primary care setting Face to face - medical assistants verbally administered the PHQ-2 and recorded the patients' responses in the electronic health record **Duration/Intensity:** Intervention: not reported Study duration: 2 years	**Data analysis** Depression screening rates were compared between routine screening by medical assistant and routine screening by physician Outcomes for different ethnicities were also analysed relative to white participants
Interventions focusing on change at both interpersonal and organisational levels		
Ortega and Rosenheck 2002 (USA) **Study design** Longitudinal interrupted time series non-experimental **Intervention:** Client-clinician ethnic and language matching for White and Hispanic homeless clients with severe mental illness in ongoing community treatment	**Mode of delivery:** Delivered by community practitioners working in mental health Face to face assertive community treatment **Duration** Intervention: not reported Study duration: 3 years	**Data analysis:** Analysis of covariance of 12-month change to determine statistically significant interactions of case managers' race or ethnicity and clients' race or ethnicity with regard to entry for into treatment Outcomes for different ethnicities were also analysed relative to white participants
Yeung et al. 2004 (USA) **Study design:** Repeat cross-sectional pre-post non-experimental **Intervention** Psychiatry and primary healthcare service integration for Chinese American adults **Comparison**	**Mode of delivery** Delivered by practitioners within the primary care setting Face to face training for PCPs A primary care nurse acted as the "bridge" or care manager. A liaison psychiatrist provided services within the primary care clinic **Duration**	**Data analysis** Referral and attendance rates were compared between the pre-implementation and post-implementation period

Historical service data	Intervention: Training of PCPs on established treatment guidelines (two, 1-hour seminars) Training of PCPs in cultural sensitivity (1-hour seminar) Appointments with liaison psychiatrist scheduled within two weeks Study duration: Records assessed for the period of the project (Jan–Dec 2000) and the year prior to it (Jan–Dec 1999)	
Interventions focusing on change at both community and organisational levels		
Hackett et al. 2009 (UK) **Study design** Repeat cross-sectional pre-post non-experimental **Intervention** Enhancing Pathways Into Care project: information provision, community engagement; link worker and more appropriate and responsive services for those from the Pakistani community in mental health crisis **Comparison** Historical service data	**Mode of delivery** Delivered by community practitioners working in mental health Face to face - Crisis Resolution Home Treatment joined with a community organisation called the Pakistani Muslim Centre to work in partnership **Duration** Intervention: not reported Study duration: 2002-2006 clinical database review / 2005-2006 case note review	**Data analysis** Referrals (to crisis resolution home or inpatient ward) and service use (admission to hospital or home treatment, length of stay) were descriptively compared between the pre-implementation and post-implementation period
Robidoux et al. 2023 (USA) **Study design** Repeat cross-sectional pre-post non-experimental **Intervention** Postpartum depression screening and referral to behaviour services (by community health workers) for Latinx immigrant mothers **Comparison** Historical service data	**Mode of delivery** Delivered by community practitioners working in mental health Face to face **Duration** Intervention: not reported Study duration: 1 year	**Data analysis** Screening and referral rates were compared between the pre-implementation and post-implementation period
Interventions focusing on change at both individual and organisational levels		
Seabrooke and Milne 2009 (UK) **Study design** Repeat cross-sectional pre-post non-experimental	**Mode of delivery** Delivered by practitioners within the primary care setting Letters and information leaflets mailed to patients Patient information leaflets were left in waiting area.	**Data analysis** Initial attendance at GP and referral rates to specialist services were descriptively compared between the pre-implementation and post-implementation period

Intervention Patient education and health care professional training to facilitate access to dementia screening and diagnosis in for older Asians **Comparison** Historical service data	Specialist dementia training for practice nurse **Duration** Intervention: not reported Study duration: Post implementation - Sept 2006 – Oct 2007 Post implementation - 3 months prior to implementation of the project in 05/06	
Interventions focusing on change across individual, interpersonal and organisation levels		
Michelson and Day 2014 (UK) **Study design** Cross-sectional post-test only quasi-experimental **Intervention** Pre-intake intervention designed to enhance initial engagement at CAMHS targeted at primary parental caregivers of all children and adolescents from Black and Minority Ethnic groups referred and accepted into CAMHS **Comparison** Historical comparison group Families who received standard clinic procedure (opt-out letter six months prior to the intervention)	**Mode of delivery** Delivered by community practitioners working in mental health The intervention was a telephone conversation during which a key worker attempted to systematically identify and address possible barriers to initial attendance at CAMHS Practitioners working in schools could deliver the intervention face-to-face **Duration/Intensity** Intervention: 20–30 min telephone conversations Study duration: 6 months.	**Data analysis** Initial and ongoing attendance (at least one appointment of the first three scheduled appointments) outcomes (attended, did not attend, discharged, cancelled) were compared between the intervention and historical comparison group DNA rates were compared between Black and Minority Ethnic and White participants
Sanchez et al. 2022 (USA) **Study design** RCT **Intervention** Person-centred cultural assessment (with primary caregivers of children aged 2-7 from ethnic minority groups with behaviour problems) **Control** Assessment as usual	**Mode of delivery** Delivered by community practitioners working in mental health Face to face - Clinical Assessment and Cultural Formulation Interview **Duration** Intervention: 2-3, one hour sessions Study duration: 3 years	**Data analysis** Initial and ongoing attendance, and clinical outcomes (treatment response, first treatment module completion) were compared between cultural assessment and assessment as usual group The impact of language (Spanish or English) on outcomes was also analysed

Key: IAPT: Improving Access to Psychological Therapy; MDT: multidisciplinary team; MH: mental health; PCPs: primary care practitioners; PHQ-2: the Patient Health Questionnaire Version 2; RCT randomised controlled trial

2.2 Effectiveness of interventions focusing on change at the individual level

Psycho-educational intervention to promote psychotherapy entry and attendance for African Americans (Alvidrez et al. 2005; USA)

Initial attendance

- There were no significant differences in the proportion of older African Americans patients, who received the psycho-educational intervention, starting therapy compared those who had been referred for psychotherapy in the 12 months prior to the intervention ($p>0.05$).
- The ethnicity of the psycho-educators (whether they were African American or non-African American), did not have a significant effect ($p=0.8$) on the proportion of older African American patients starting psychotherapy following the psycho-educational intervention ($p>0.05$).

Ongoing attendance

- Those who began psychotherapy following the psycho-educational intervention were significantly more likely to attend more psychotherapy sessions in a 3-month period than those who had been referred for psychotherapy in the 12 months prior to the intervention ($p<0.05$).
- The ethnicity of the psycho-educators (whether they were African Americans or non-African Americans) did not significantly influence the number of sessions attended by older African Americans following the psycho-educational intervention ($p>0.05$).

Psycho-educational intervention to increase help seeking intentions around addressing difficulties coping with depressive symptoms for adolescents from black and non-Black ethnic minority groups (Martin et al. 2022: USA)

Depression stigma (surrogate outcome for help seeking intentions)

- There were no significant differences in depression stigma for Black participants who viewed a video that addressed difficulties coping with depressive symptoms (video 1) compared to baseline ($p>0.001$[6]).
- There was a significant reduction in depression stigma for Black participants who viewed a video tailored to address unique aspects of being a Black adolescent girl (video 2) compared to baseline ($p<0.001$[6]).
- For non-Black participants, those who watched video 1 and video 2 experienced a significant decrease in mean depression stigma scores ($p<0.001$[6]).
- There were no significant differences in depression stigma for Black participants relative to non-Black participants across video 1, 2 and the control video (hobbies and interests) ($p>0.001$[6]).

Help seeking intentions

- There were significant increases in intention to seek help for emotional problems and suicidal thoughts from a doctor/GP for both Black and non-Black participants who viewed a video that addressed difficulties coping with depressive symptoms, (video 1) compared to baseline ($p<0.001$[6]).

[6] Significance level set as $p<0.001$ by the study authors

- There were significant increases in intention to seek help for emotional problems and suicidal thoughts from a mental health professional for both Black and non-Black participants who viewed a video that addressed difficulties coping with depressive symptoms, thoughts that life is not worth living, false assumptions about treatment, and decisions on how and when to seek help (video 1) compared to baseline ($p<0.01$[7]).
- There were significant increases in intention to seek help for emotional problems and suicidal thoughts from a doctor/GP for both Black and non-Black participants who viewed a video tailored to address unique aspects of being a Black adolescent girl (video 2) compared to baseline ($p<0.01$).
- There were no significant differences in intention to seek help for emotional problems and suicidal thoughts from a mental health professional for both Black and non-Black participants who viewed a video tailored to address unique aspects of being a Black adolescent girl (video 2) compared to baseline ($p>0.01$).
- While results of the post-hoc analysis by ethnicity were not reported, the authors stated that the analysis did not show difference across ethnicity in a preferred source for help.

Patient education DVD and bilingual leaflet about dementia and getting help for memory symptoms for South Asian adults without known dementia aged >50 years (Mukadam et al. 2018: UK)

Help seeking intentions

- There were no significant differences in help seeking intentions for memory problems for South Asian adults without known dementia aged >50 years who received a trilingual DVD and information leaflet (n=17) compared to those who did not ($p>0.05$).
- Post hoc analysis showed that those who viewed the DVD[8], were significantly more likely to seek help for memory problems compared to those in the control group (not receiving a DVD) ($p<0.05$), however these results were based on small numbers and should be treated with caution.

Psycho-educational intervention to increase awareness of mental health issues and available resources among elderly Chinese Americans (Teng and Friedman 2009: USA)

Help seeking intentions

- Immediately following a psycho-educational intervention (one-hour didactic lecture to raise mental health awareness) for older Chinese American participants, a significant increase in intention to seek help from mental health professional for psychiatric symptoms was detected ($p=0.005$). However, there were no significant differences in intention to consult primary care doctors ($p=0.05$)[9].

2.3 Bottom line results of interventions focusing on change at the individual level

There were four studies (two RCTs, one quasi-experimental study and one non-experimental study) that investigated the effectiveness of four different psycho-educational interventions

[7] Significance level set as $p<0.001$ by the study authors.
[8] 17 out of 41 people assessed the intervention and of these 10 looked only at the leaflet, three only looked at the DVD and four people looked at both leaflet and DVD.
[9] The study authors commented that there may have been multiple barriers such as stigma that preventing this population from consulting mental health experts.

focusing on change at the individual level, and targeted at different ethnic minority groups and age ranges. Three were conducted in the USA and one in the UK.

- A quasi-experimental study (medium quality rating) found that a **psycho-educational intervention** aimed at promoting **psychotherapy entry and attendance** among **African Americans, increased ongoing attendance** but had **no effect on initial attendance** compared to those referred for psychotherapy in the 12 months previous. Additionally, the ethnicity of psycho-educators did not impact initiation or attendance (Alvidrez et al. 2005; USA)
- A RCT (medium quality rating) found that a **psycho-educational intervention** that addressed difficulties coping with depressive symptoms led to **increased help-seeking intentions in both Black and non-Black participants,** although **did not reduce depression stigma for Black participants.** However, intervention effects on depression stigma and help-seeking were comparable regardless of ethnicity (Martin et al. 2022: USA)
- The same RCT (medium quality rating) found that a **psycho-educational intervention** addressing unique aspects of being a Black adolescent girl with **depressive symptoms** led to **reduced depression stigma** and **increased help-seeking intentions in Black and non-Black participants,** with comparable effects observed regardless of ethnicity (USA) (Martin et al. 2022: USA)
- A RCT (medium quality rating) found that a trilingual DVD and information leaflet aimed at educating **South Asian adults aged over 50 years about dementia** and memory symptoms **did not impact help-seeking intentions** (Mukadam et al. 2018: UK).
- A non-experimental study (low quality rating) showed that a psycho-educational intervention to increase **awareness of mental health issues** and available resources among **elderly Chinese Americans increased their intention to seek help from mental health professionals**, but not from primary care doctors (Teng and Friedman

2.4 Effectiveness of interventions focusing on change at the organisational level

Integrating mental health and substance abuse services into primary care settings for older adults (> 65 years) from ethnic minority groups (Arean et al. 2008; Ayalon et al, 2007; Levkoff et al. 2004: USA).

Initial attendance

- **Asian participants** were significantly less likely **to have at least one mental health visit** when mental health and substance abuse services were integrated into primary care compared to speciality mental health care (aOR[10] 0.53 (95% CI: 0.37, 0.77).
- However, **Latino participants** were significantly more likely to have **at least one mental health visit** when mental health and substance abuse services were integrated into primary care compared to speciality mental health care (aOR[7] 3.6 (95% CI: 2.22, 5.82).
- Subgroup analysis on data from one of 10 GP practices revealed **Black participants** were significantly more likely to have **at least one mental health visit** when mental

[10] Adjusted for baseline levels of distress as measured by the General Health Questionnaire

health and substance abuse services were integrated into primary care compared to speciality mental health care (aOR[7] 14.13 (95% CI: 4.76, 41.95).

- The odds of having **at least one mental health visit** when mental health and substance abuse services were integrated into primary care was not significantly different **for Black, Latino or Other ethnicities** relative to White participants. However, the odds of **Asian participants** having **at least one mental health visit** when mental health and substance abuse services into primary care was significantly lower relative to White participants (aOR[7] 0.24; 95% CI: 0.09, 0.61)[11].
- The estimated **number of days from baseline evaluation to engagement in the first mental health visi**t was significantly lower for **Black participants** ($p<0.05$) when mental health and substance abuse services were integrated into primary care compared to speciality mental health care.
- There were no significant differences **in the number of days from baseline evaluation to engagement in the first mental health visit across** the **different ethnic minority groups** compared to White participants ($p>0.05$).
- Subgroup analysis on data from one of 10 GP practices revealed that the time from baseline evaluation to engagement in the first mental health visit was significantly lower when mental health and substance abuse services were integrated into primary care for both **Black** (aHR[12] 7.82 (95% CI 3.65, 16.75) and **White participants** (aHR[8] 2.48 (95% CI: 1.20, 5.13) relative to speciality mental health care.

Ongoing attendance

- **White, Black and Latino participants** had a significantly **greater number of visits** when mental health and substance abuse services integrated into primary care compared to speciality mental health ($p<0.05$).
- **Asian participants** had a significantly **greater number of visits in specialty mental health services** compared to when mental health and substance abuse services were integrated into primary care ($p<0.05$).[13]
- Subgroup analysis on data from one of the 10 GP practices revealed that when services were offered in a speciality mental health setting, **Black participants** had a significantly smaller number of overall mental health visits relative to White participants (aIRR[8] 2.87 (95% CI 1.06, 7.73).

Clinical outcomes

- There were no significant differences in levels of anxiety or depression at six months for White and ethnic minority participants when mental health and substance abuse services were integrated into primary care or when mental health services were offered in speciality mental health care.
- Across both groups mean post treatment symptoms of anxiety and depression, remained relatively high.

Placing mental health link workers in GP surgeries to increase referrals of Black and Minority Ethnic individuals to the IAPT programme (Evans et al. 2014:UK)[14]

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[11] The authors do not discuss why access was decreased for Asian participants.
[12] Adjusted for baseline levels of distress as measured by the General Health Questionnaire
[13] The authors do not discuss why Asian participants had a significantly greater number of visits in specialty mental health services compared to integrated services into primary care.
[14] No statistical analyses reported

Referrals

- Referral rates of **Black and Minority Ethnic patients** from primary care to IAPT from **practices who employed a link worker** increased from January 2010 to July 2020 (0.65 to 1.37 patients per 10,000 practice population).
- This referral rate remained stable until the end of the study despite the addition of more link workers.
- The mean referral rate of Black and Minority Ethnic patients (standardised to the size of the population served by practices) to IAPT for practices without a link worker was 0.35 Black and Minority Ethnic referrals per week per 10,000 patients and this was unchanged throughout the period of the study.

Routine depression screening by medical assistants across ethnic minority groups (Gorman et al 2021: USA).

Screening

- Depression screening rates significantly increased for Black/African, Asian and White and other ethnicities when routine depression screening was performed by medical assistants compared to routine depression screening performed by physicians in the 12 months prior to the intervention ($p<0.001$).
- When **routine depression screening was performed by physicians,** screening was significantly less likely to occur at visits by **Asian patients** than at visits by White patients (OR 0.82, 95% CI 0.76, 0.89) and at visits by **Black/African American patients** than at visits by White patients (OR 0.91, 95% CI 0.84, 0.99).
- When **routine depression screening was performed by medical assistants,** screening was significantly more likely to occur at visits by **Asian patients** than at visits by White patients (OR 1.28, 95% CI 1.09, 1.50) and at visits by **Black/African American** patients than at visits by White patients (OR 1.11, 95% CI 1.02, 1.20)[15].

2.5 Bottom line results of interventions focusing on change at the organisational level

There were three studies (one RCT and two quasi-experimental studies) that investigated the effectiveness of three different interventions focusing on change at the organisational level. Two were conducted in the USA and one in the UK.

- A RCT (high quality rating) that sought to **integrate specialist mental health services into primary care** for **older adults from ethnic minority groups** found that the number of days until first visit, initial and ongoing attendance rates varied depending on the ethnicity of the participants. Additionally, there was **no impact on levels of depression and anxiety** (Arean et al. 2008; Ayalon et al, 2007; Levkoff et al. 2004: USA).
- A quasi-experimental study (medium quality rating) found that placing **mental health link workers in GP surgeries** appeared to **increase referrals of Black and Minority Ethnic individuals to an IAPT program** compared to practices without link workers (Evans et al. 2014:UK UK).

[15] The authors do not discuss routine depression screening was more likely for Asian participants.

- A quasi-experimental study (high quality rating) reported **improved depression screening rates for Black/African American, Asian,** White and other ethnic participants when **routine depression screening was undertaken by medical assistants** compared to physicians. Additionally, depression screening by medical assistants for Black/African American and Asian participants was more likely to occur compared to White participants (Gorman et al 2021: USA).

2.6 Effectiveness of interventions focusing on change across multiple levels

2.6.1 Interpersonal and organisational levels

Client-clinician ethnic and language matching for White and Hispanic homeless clients with severe mental illness in ongoing community treatment (Ortega and Rosenheck 2002: USA).

Service use

- There were no significant differences for any of the service use outcomes (outpatient psychiatric services, medical-surgical services, substance abuse services, service integration - the receipt of a range of service by an individual client) for **Hispanic clients** ($p>0.05$).
- **Hispanic clients** had a significant increase in service integration (the total receipt of a range of services by an individual client) compared to **White clients** ($p<0.05$).[16]
- There were no significant interactions between **client and case manager race** in any of the service use outcomes ($p>0.05$).
- **Hispanic clients** had more problems at baseline in psychiatric and substance abuse domains and showed less improvement on several measures of psychiatric status over the next 12 months than White clients.

Clinical outcomes

- **White clients** had significantly better improvement on a number of clinical outcomes than **Hispanic clients**, namely psychosis symptoms ($p=0.0001$), psychiatric problems ($p=0.04$) and depression scores ($p<0.05$).
- The interaction of **client and case manager race** was only significant for psychosis symptoms where **Hispanic clients of Hispanic case managers** had less reduction in psychotic symptoms than other ethnic and racial pairings ($p<0.05$)[17].

Psychiatry and primary healthcare service integration for Chinese American adults (Yeung et al. 2004: USA).

Referrals

- Following the **integration of psychiatry and primary care services**, there was a significant increase in the number of **Chinese American patients** referred to see a

[16] This is a positive outcome, indicating success in meeting the needs of Hispanic clients in the community.

[17] The authors suggest possible reasons for this: i) culturally relevant care may be more important for Spanish-speaking clients. ii) Hispanics are underrepresented in homeless populations due to strong family networks; those who become homeless may have more severe psychiatric illnesses. Iii) Ethnic matching may offer limited benefits for homeless Hispanics in the program, as their primary needs are met regardless of ethnicity.

liaison psychiatrist within primary care compared to the preceding 12 months prior to implementation ($p<0.05$).

Initial attendance

- Following the **integration of psychiatry and primary care services**, there was a significant increase in the number of **Chinese American** patients who showed up for their initial mental health evaluation, compared to the preceding 12 months prior to implementation ($p<0.05$).

2.6.2 Community and organisational level interventions

Enhancing Pathways into Care project: information provision, community engagement; link worker and more appropriate and responsive services for those from the Pakistani community in mental health crisis (Hackett et al. 2009: UK)[18]

Referrals

- There was an increase in the percentage of **Pakistani patients** receiving crisis referrals to a crisis resolution and home treatment service following the intervention (3.2% compared to 2.6%). No significance testing was reported.
- There was an increase in the number of referrals to the Pakistani Muslim Centre from home treatment (one in 2005 compared to seven in 2006) and from the inpatient ward (from zero in 2005 compared to nine in 2006).

Service use

- There was an increase in the proportion of **Pakistani patients** receiving home treatment (3.4% in 2005 compared to 3.8% in 2006) and admitted to hospital (3.8% in 2005 compared to 4% in 2006).
- There were minimal fluctuations in numbers and proportional percentages of **Pakistani patients** admitted to inpatient setting.
- The authors reported that there was an overall trend for reduction in inpatients length of stay across the five-year period.

Providing postpartum depression screening and referral to behavioural services by community health workers for Latinx immigrant mothers (Robidoux et al. 2023: USA).

Screening

- During the project, out of 832 well-child visits, 552 (66%) patients were screened for post-partum depression, compared to 452 (45%) prior to the implementation of the project. The difference in screening was significant ($p < 0.001$).

Referrals

- There were no significant differences in referral rates to behavioural health services for Latinx immigrant mothers after positive postpartum screening during routine well-child visits compared to the 6 months prior to implementation of the project ($p<0.05$)[19].

[18] No statistical analyses reported.

[19] The authors identified multiple barriers to referral during implementation, reflecting concerns documented in existing literature which included time constraints, lack of a referral process, difficulty in finding mental health resources, uninsured patients, long wait times at free clinics, and selective referral based on screening scores.

2.6.3 Individual and organisational level interventions

Patient education and health care professional training to facilitate access to dementia screening and diagnosis in for older Asians (Seabrooke and Milne 2009: UK)[20]

Initial attendance

- During the 6-week period following the **patient education element** of the interventions **(letters and information leaflets)**, five **Asian patients** presented at the GP surgery, compared to no patients in the three months prior to project implementation.

Referrals

- There was an increase in referrals to a specialist memory clinic and to a local voluntary agency.

2.6.4 Individual, interpersonal and organisation level interventions

Pre-intake intervention designed to enhance initial engagement at CAMHS targeted at primary parental caregivers of all children and adolescents from Black and Minority Ethnic groups referred and accepted into CAMHS (Michelson and Day 2014: UK).

Initial and ongoing attendance

- There were no significant differences in **first appointment attendance rates** and **attending at least one appointment of the first three scheduled CAMHS appointments** between **children and adolescents from Black and Minority Ethnic groups** who received a **pre-intake engagement intervention** and those in the historical comparison group who received standard clinic procedures ($p>0.05$).
- The classification of reasons for not attending were (cancelled, discharged and did not attend). There were no significant differences for the categories of cancelled and discharged between **children and adolescents from Black and Minority Ethnic groups** in the **pre-intake engagement intervention** and the historical comparison group ($p>0.05$). However, significantly fewer **children and adolescents from Black and Minority Ethnic groups** were recorded as "did not attend" in the **pre-intake engagement intervention** group compared to those in the historical comparison group ($p<0.05$).

Conducting person-centred cultural assessments with primary caregivers of children aged 2-7 from ethnic minority groups experiencing behaviour problems (Sanchez et al. 2022: USA).

Initial attendance

- Cultural formulation interview with assessment as usual (CFI+AAU) was not found to be significantly more effective in improving initial treatment attendance of ethnically diverse children[21] with behaviour problems and their primary caregivers compared to assessment as usual only (AAU) ($p=0.40$). However, when moderating for language provision, for those who received the intervention (CFI+AAU) in Spanish, the probability of attending the first treatment session was significantly higher ($p<0.05$).

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[20] No statistical analyses reported.

[21] Ethnicity: Hispanic/Latinx (53.8%), Haitian (2.6%), not Hispanic or Haitian (43.6%)
Race: American Indian (2.6%), Asian (2.6%), Black or African American (28.2%), White (56.4%), Bi/Multiracial (10.3%)

Ongoing attendance

- Weekly session attendance of ethnically diverse children[15] with behaviour problems and their primary caregivers was not significantly different between CFI+AAU and AAU (p=0.38). However, mean session attendance was significantly higher for CFI+AAU when services were provided in Spanish (p<0.05).

Treatment module completion

- Cultural formulation interview with assessment as usual was significantly more effective in improving first treatment module completion of ethnically diverse children[22] with behaviour problems and their primary caregivers compared to AAU (p=0.03). Additionally, when moderating for language provision, for those who received CFI+AAU in Spanish, probability of first module completion was significantly higher (p<0.05), while no significant difference was observed between CFI+AAU and AAU when these were provided in English (p>0.05).

Clinical outcomes

- Treatment response (child behaviour problems dropped into the subclinical range) was not significantly different between groups receiving CFI+AAU or AAU (p>0.05). However, when services were provided in Spanish, children and their primary caregivers in the CFI+AAU group were significantly more likely to be treatment responders compared to AAU (p<0.05).

2.7 Bottom line results for interventions focusing on change across multiple levels

There were seven studies (one quasi-experimental study and six non-experimental studies) that investigated the effectiveness of seven different interventions focusing on change at across multiple levels. Four were conducted in the USA and three in the UK.

- A non-experimental study (medium quality rating) found that an intervention that involved **client-clinician ethnic and language matching** showed **no difference in service use and clinical outcomes** for homeless clients across **different ethnic minority groups with severe mental illness**. However, **Hispanic clients of Hispanic case managers** had **less reduction in psychotic symptoms** than other ethnic and racial pairings (Ortega and Rosenheck 2002: USA).
- A non-experimental study (medium quality rating) of an intervention **integrating psychiatry and primary healthcare services** showed **increased referrals to liaison psychiatrists within primary care** and i**mproved initial attendance** rates for mental health evaluations among **Chinese American adults** (Yeung et al. 2004: USA).
- A non-experimental study (low quality rating) that investigated the **Enhancing Pathways Into Care project** suggested improved crisis referrals to mental health services and increased utilization of crisis resolution and home treatment services among **Pakistani patients**, alongside improvement in referrals to community centres, home treatment and inpatient services and decreased inpatient length of stay (Hackett et al. 2009: UK).

[22] Ethnicity: Hispanic/Latinx (53.8%), Haitian (2.6%), not Hispanic or Haitian (43.6%)
Race: American Indian (2.6%), Asian (2.6%), Black or African American (28.2%), White (56.4%), Bi/Multiracial (10.3%),

- A non-experimental study (low quality rating) of **community health workers providing postpartum depression screening** during well-child visits was found to **improve screening rates for Latinx immigrant mothers** compared to pre-project rates but did **not have a significant impact on referral rates** to behavioural health services following positive screenings (Robidoux et al. 2023: USA).
- A non-experimental study (low quality rating) that involved **patient education and healthcare professional training** appeared to **increase initial attendance at GP surgeries by older Asians for dementia screening and diagnosis**, with subsequent **rises in referrals to specialist memory clinics** and local voluntary agencies (Seabrooke and Milne 2009: UK).
- A quasi experimental study (medium quality rating) of a **pre-intake engagement intervention** targeting **primary not show any significant differences in initial or ongoing appointment attendance rates** compared to a historical comparison group Michelson and Day 2014: UK).
- The classification of reasons for not attending were (cancelled, discharged and did not attend). There were no significant differences for the categories of cancelled and discharged between **children and adolescents from Black and Minority Ethnic groups** in the **pre-intake engagement intervention** and the historical comparison group ($p>0.05$). However, significantly fewer **children and adolescents from Black and Minority Ethnic groups** were recorded as “did not attend” in the **pre-intake engagement intervention** group compared to those in the historical comparison group ($p<0.05$).
- A RCT (medium quality rating) that investigated conducting **person-centred cultural assessments** alongside treatment as usual did **not impact initial or ongoing attendance or clinical outcomes** for **ethnically diverse children with behaviour problems** and their caregivers, yet when services were provided **in Spanish, attendance and treatment response (child behaviour problems dropped into the subclinical range) improved** (Sanchez et al. 2022: USA).

Table 2: Summary of effectiveness by interventions, ethnic minority groups, and outcomes

Effectiveness of interventions focusing on change at the individual level		
Author/ Intervention	**Population**	**Outcome**
Alvidrez et al. 2005 15-minute scripted individual psycho-education session	African American	Initial attendance - Proportion of patients starting therapy
	African American	Initial attendance - Proportion of patients starting therapy & ethnicity psycho educators
	African American	Ongoing attendance - Number of sessions attended over 3 months
	African American	Ongoing attendance - Number of sessions attended over 3 months & ethnicity psycho educators
Martin et al. 2022 (Video 1) Social-contact based video intervention– interviews with a 16-year-old Black female actor. "Depressed": The videos address difficulties coping with depressive symptoms	Black	Help seeking intentions from doctor/GP
	Non-Black	Help seeking intentions from doctor/GP
	Black relative to non-Black	Help seeking intentions from doctor/GP
	Black	Help seeking intentions from mental health professional
	Non-Black	Help seeking intentions from mental health professional
	Black relative to non-Black	Help seeking intentions from mental health professional
	Black	Depression stigma (surrogate outcome for help seeking intentions)
	Non-Black	Depression stigma (surrogate outcome for help seeking intentions)
	Black relative to non-Black	Depression stigma (surrogate outcome for help seeking intentions)
Martin et al. 2022 (Video 2) "Depressed adjusted": is adjusted to aspects unique to being a Black adolescent girl	Black	Help seeking intentions from doctor/GP
	Non black	Help seeking intentions from doctor/GP
	Black relative to non-Black	Help seeking intentions from doctor/GP
	Black	Help seeking intentions from mental health professional
	Non-Black	Help seeking intentions from mental health professional
	Black relative to non-Black	Help seeking intentions from mental health professional
	Black	Depression stigma (surrogate outcome for help seeking intentions)
	Non-Black	Depression stigma (surrogate outcome for help seeking intentions)
	Black relative to non-Black	Depression stigma (surrogate outcome for help seeking intentions)
Mukadam et al. 2018 A trilingual DVD and a bilingual leaflet	South Asians	Behavioural intention - change in peoples' perceptions about seeking help for dementia
Teng and Friedman 2009 One-hour educational presentation delivered in English and Mandarin	Chinese American	Help seeking intention from MH professional for psychiatric symptoms
	Chinese American	Help seeking intention from GP for psychiatric symptoms

Effectiveness of interventions focusing on change at the organisational level		
Author/ Intervention	**Population (ethnic minority grouping)**	**Outcome**
Arean et al. 2008 Integrating specialist mental health services in primary care settings	Latino	Initial attendance - % subjects having at least one mental health visit
	Black / White	Initial attendance - % subjects having at least one mental health visit
	Asian	Initial attendance - % subjects having at least one mental health visit
	Black, Latino relative to White	Initial attendance - % subjects having at least one mental health visit
	Asian relative to White	Initial attendance - % subjects having at least one mental health visit
	Black	Initial attendance - Estimated number of time (days) to the first visit of any type
	Latino / Asian / White	Initial attendance - Estimated number of time (days) to the first visit of any type
	Black, Latino, Asian relative to White	Initial attendance - Estimated number of time (days) to the first visit of any type
	Black / Latino / White	Ongoing attendance - Average number of visits
	Asian	Ongoing attendance - Average number of visits
	Black / Latino / Asian / White	Clinical outcomes - Anxiety
	Black / Latino / Asian / White	Clinical outcomes - Depression
Evans et al. 2014 Placing mental health link workers in GP surgeries	Black and Minority Ethnic	Referrals - Referral rates for IAPT
Gorman et al. 2021 Routine depression screening by medical assistants	Black/African American / White / Asian	Screening - Rates of depression screening
	Black/African American and Asian relative to White	Screening - Rates of depression screening
Effectiveness of interventions focusing on change at both interpersonal and organisational levels		
Ortega and Rosenheck 2002 Client-clinician ethnic and language matching	Hispanic	Service use - Service integration and client-case manager race
	Hispanic	Clinical outcomes - Psychosis symptoms and client-case manager race
Yeung et al. 2004 Psychiatry and primary healthcare service integration	Chinese Americans	Referrals - Primary care patients referred to mental health service
	Chinese Americans	Initial attendance - Show-up rate for initial evaluation
Effectiveness of interventions focusing on change at both community and organisational levels		
Hackett et al. 2009 Enhancing Pathways Into Care project	Pakistani	Referrals - % referrals to crisis resolution home treatment or inpatient ward
	Pakistani	Service use - Number and proportional percentages of admissions
	Pakistani	Service use - Average length of stay
Robidoux et al. 2023	Latinx mothers	Screening - Screening rate of eligible postpartum mothers
	Latinx mothers	Referral - Referral rate for patients that screened positive

Postpartum depression screening by community health workers		
Effectiveness of interventions focusing on change at both individual and organisational levels		
Seabrooke and Milne 2009 Patient education and health care professional training	Asian	Initial attendance
	Asian	Referral
Effectiveness of interventions focusing on change at individual, interpersonal and organisational levels		
Michelson and Day 2014 Pre-intake intervention designed to enhance initial engagement	Black and Minority Ethnic	Initial attendance - Attendance at first appointment (attended, cancelled, discharged)
	Black and Minority Ethnic	Initial attendance – Attendance at first appointment (did not attend)
	Black and Minority Ethnic relative to White	Initial attendance – Attendance at first appointment (did not attend)
	Black and Minority Ethnic	Ongoing attendance - Attendance within first three appointments (attended, cancelled, discharged)
	Black and Minority Ethnic	Ongoing attendance - Attendance within first three appointments (did not attend)
Sanchez et al. 2022 (Overall) Person-centred cultural assessment	Hispanic/Latinx, Haitian, or Not Hispanic or Haitian	Initial attendance – Initial treatment session attendance
	Hispanic/Latinx, Haitian, or Not Hispanic or Haitian	Ongoing attendance - Weekly session attendance rates
	Hispanic/Latinx, Haitian, or Not Hispanic or Haitian	Clinical outcomes - Treatment response
	Hispanic/Latinx, Haitian, or Not Hispanic or Haitian	Clinical outcomes - First treatment module completion
Sanchez et al. 2022 (in Spanish) Person-centred cultural assessment	Hispanic/Latinx, Haitian, or Not Hispanic or Haitian	Initial attendance – Initial treatment session attendance
	Hispanic/Latinx, Haitian, or Not Hispanic or Haitian	Ongoing attendance - Weekly session attendance rates
	Hispanic/Latinx, Haitian, or Not Hispanic or Haitian	Clinical outcomes - Treatment response
	Hispanic/Latinx, Haitian, or Not Hispanic or Haitian	Clinical outcomes - First treatment module completion

Key: Green –outcomes favour the intervention; Amber – No difference between intervention and comparison; Red – Outcomes favour the comparison, or ; No colour – only descriptive statistics, no statistical significance can be identified, GP: general practitioner; MH: mental health

Table 3: Summary of strength of the evidence

The strength of the evidence supporting (overall findings based on each outcome) was established and graded based on the quality, quantity and consistency of the available evidence, the likely clinical impact and generalisability of the findings.

Outcome	Quality	Consistency	Quantity	Clinical Impact	Generalisability	GRADE[b]
Interventions focusing on change at the individual level						
Ongoing appointment attendance Alvidrez et al. 2005	One study medium quality	N/A	Limitations (one study small sample size)	Limitations (one study no effect size)	USA Older adults African American participants	Grade III
Ethnicity of psycho educator on initial or ongoing appointment attendance Alvidrez et al. 2005	One study medium quality	N/A	Limitations (one study small sample size)	Limitations (one study no effect size)	USA Older adults African American participants	Grade III
Initial appointment attendance Alvidrez et al. 2005	One study medium quality	N/A	Limitations (one study small sample size)	Limitations (one study no effect size)	USA Older adults African American participants	Grade III
Help seeking intention doctor/GP Teng and Friedman 2009 Martin et al. 2022	One study medium quality One study low quality	Inconsistency (one study increase) (one study no difference)	Limitations (one study small sample size) (one study adequate sample size)	Limitations (two studies no effect sizes)	USA Adolescents aged 14-18 years Black participants USA Older adults Chinese American participants	Grade III
Help seeking intention MH professionals Teng and Friedman 2009 Martin et al. 2022	One study medium quality One study low quality	Inconsistency (one study increase) (one study no difference)	Limitations (one study small sample size) (one study adequate sample size)	Limitations (two studies no effect sizes)	USA Adolescents aged 14-18 years Black participants USA Older adults Chinese American participants	Grade III
Help seeking intentions regarding dementia Mukadam et al. 2018	One study medium quality	N/A	Limitations (one study small sample size)	Limitations (one study no effect size)	UK Adults >50 years South Asian participants	Grade III
Interventions focusing on change at the organisational level						
Number days until first visit Arean et al. 2008	One study high quality	N/A	No limitations	No limitations	USA Older adults (>65 years) Ethnic minority groups	Grade II

Initial appointment attendance Arean et al. 2008	One study high quality	N/A	No limitations	No limitations	USA Older adults (>65 years) Ethnic minority groups	Grade II
Ongoing appointment attendance Arean et al. 2008	One study high quality	N/A	No limitations	No limitations	USA Older adults (>65 years) Ethnic minority groups	Grade II
Depression Arean et al. 2008	One study high quality	N/A	No limitations	No limitations	USA Older adults (>65 years) Ethnic minority groups	Grade II
Anxiety Arean et al. 2008	One study high quality	N/A	No limitations	No limitations	USA Older adults (>65 years) Ethnic minority groups	Grade II
Referrals Evans et al. 2014	One study medium quality	N/A	Limitations (one study adequate sample size)	Limitations (one study no effect size)	UK Adults Black and Minority Ethnic	Grade III
Screening Gorman et al 2021	One study high quality	N/A	No limitations	No limitations	USA Adults Ethnic minority groups	Grade II
Interventions focusing on change on change at both interpersonal and organisational levels						
Service use Ortega and Rosenbeck 2002	One study medium quality	N/A	Limitations (one study adequate sample size)	Limitations (one study no effect size)	USA Adults (Homeless clients) Hispanic	Grade III
Clinical outcomes Ortega and Rosenheck 2002	One study medium quality	N/A	Limitations (one study adequate sample size)	Limitations (one study no effect size)	USA Adults (Homeless clients) Hispanic	Grade III
Psychosis symptoms Ortega and Rosenheck 2002	One study medium quality	N/A	Limitations (one study adequate sample size)	Limitations (one study no effect size)	USA Adults (Homeless clients) Hispanic	Grade III
Referral Yeung et al. 2004	One study medium quality	N/A	Limitations (one study small sample size)	Limitations (one study no effect size)	USA Adults Chinese Americans	Grade III
Initial appointment attendance Yeung et al. 2004	One study medium quality	N/A	Limitations (one study small sample size)	Limitations (one study no effect size)	USA Adults Chinese Americans	Grade III
Interventions focusing on change on change at both community and organisational levels						
Referral Hackett et al. 2009 Robidoux et al. 2009	Two studies low quality	Inconsistency (one study increase, no statistical test) (one study no difference)	Limitations (one study small sample size) (one study adequate sample size)	Limitations (two studies no effect sizes)	UK Adults Pakistani participants USA Mothers	Grade III

					Latinx	
Service use Hackett et al. 2009	One study low quality	N/A	Limitations (one study small sample size)	Limitations (one study no effect sizes)	UK Adults Pakistani participants	Grade III
Length of stay Hackett et al. 2009	One study low quality	N/A	Limitations (one study small sample size)	Limitations (one study no effect sizes)	UK Adults Pakistani participants	Grade III
Screening Robidoux et al. 2023	One study low quality	N/A	No limitations	Limitations (one study no effect sizes)	USA Mothers Latinx	Grade III
Interventions focusing on change on change at both individual and organisational levels						
Initial appointment attendance Seabrooke and Milne 2009	One study low quality	N/A	Limitations (one study small sample size)	Limitations (one study no effect sizes)	UK Older Adults Asians	Grade III
Referral Seabrooke and Milne 2009	One study low quality	N/A	Limitations (one study small sample size)	Limitations (one study no effect sizes)	UK Older Adults Asians	Grade III
Interventions focusing on change on change at individual, interpersonal and organisation levels						
Initial attendance Michelson and Day 2014 Sanchez et al. 2022	Two studies medium quality	Inconsistency (One study no difference) (One study mixed results)	Limitations (two studies small sample sizes)	Limitations (One study no effect size) (One study effect sizes calculated)	UK Primary parental caregivers of all children and adolescents Black and Minority Ethnic USA Primary caregivers of children aged 2-7 years Ethnic minority groups (Hispanic/Latinx, Haitian, or Not Hispanic or Haitian)	Grade III
Ongoing attendance Michelson and Day Sanchez et al. 2022	Two studies medium quality	Inconsistency (One study no difference) (One study mixed results)	Limitations (two studies small sample sizes)	Limitations (One study no effect size) (One study effect sizes calculated)	UK Primary parental caregivers of all children and adolescents Black and Minority Ethnic USA Primary caregivers of children aged 2-7 years Ethnic minority groups (Hispanic/Latinx, Haitian, or Not Hispanic or Haitian)	Grade III

Treatment completion Sanchez et al. 2022	One study medium quality	N/A	Limitations (one study small sample sizes)	No limitations	USA Primary caregivers of children aged 2-7 years Ethnic minority groups (Hispanic/Latinx, Haitian, or Not Hispanic or Haitian)	Grade III
Treatment response Sanchez et al. 2022	One study medium quality	Inconsistency (One study mixed results)	Limitations (one study small sample sizes)	No limitations	USA Primary caregivers of children aged 2-7 years Ethnic minority groups (Hispanic/Latinx, Haitian, or Not Hispanic or Haitian)	Grade III

[a] The interaction of client and case manager race was only significant for psychosis symptoms where Hispanic clients of Hispanic case managers had less reduction in psychotic symptoms than other ethnic and racial pairings ($p<0.05$).
[b] The strength of the overall evidence supporting each conclusion (associated with each outcome) were assessed using the approach used by the Academy of Nutrition and Dietetics (Academy of Nutrition and Dietetics 2022) (see Section 5.8) and Table 8.

Grade I: Good / Strong—The evidence consists of results from studies of strong design for answering the question addressed. The results are both clinically important and consistent with minor exceptions at most. The results are free of serious doubts about generalizability, bias, and flaws in research design. Studies with negative results have sufficiently large sample sizes to have adequate statistical power.

Grade II: Fair—The evidence consists of results from studies of strong design answering the question addressed, but there is uncertainty attached to the conclusion because of inconsistencies among the results from different studies or because of doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from weaker designs for the questions addressed, but the results have been confirmed in separate studies and are consistent with minor exceptions at most.

Grade III: Limited / Weak—The evidence consists of results from a limited number of studies of weak design for answering the questions addressed. Evidence from studies of strong design is either unavailable because no studies of strong design have been done or because the studies that that have been done are inconclusive due to lack of generalizability, bias, design flaws, or inadequate sample sizes.

3. DISCUSSION

The purpose of this rapid review was to assess the effectiveness of interventions that enhance equitable or overall access to mental health services by ethnic minority groups. Studies included a diverse range of participants, encompassing various age groups and ethnic backgrounds with a range of mental health conditions. The most frequently cited mental health conditions were anxiety and depression.

There is a plethora of evidence over five decades indicating that inequalities in access to, experience, and outcomes of mental healthcare among ethnic minority groups (Bansal et al. 2022). Individuals from these groups are more likely to experience undiagnosed and untreated mental illness, enter healthcare services during crises or through other challenging pathways, and receive diagnoses of severe mental illnesses such as schizophrenia, bipolar and psychosis compared to individuals from White backgrounds (Halvorsrud et al. 2019). Delayed provision of mental health care is associated with poorer outcomes for both common and severe mental disorders, as well as increased reliance on crisis interventions (Boonstra et al. 2012). Additionally, international research has identified that the barriers to accessing mental health care for individuals from ethnic minority groups are associated with their ability to seek services and the availability of services (Lowther-Payne et al. 2023). One of the ways that these barriers can be addressed is through the integration of specialist mental health services within the primary care setting and two of the studies. This review found that the integration of specialist mental health services into primary care improved referrals and initial attendance rates among Chinese American adults (Yeung et al. 2004), whilst Arean et al. (2008) investigated the integration of mental health and substance abuse services into primary care targeting older adults from ethnic minority groups and reported varied attendance rates by ethnicity and no notable effect on depression and anxiety levels.

Insufficient knowledge about mental health and available services acts as a significant barrier, impeding individuals from seeking and accessing mental health care often leading to delays or avoidance of seeking help (Aggarwal et al. 2016, Interian et al. 2013) and can hinder decisions around treatment (Aggarwal et al. 2016). Across the included studies in this review several of the interventions have sought to address this by providing culturally appropriate information. For example, psycho-educational interventions have utilised resources such as leaflets (Mukadam et al. 2018; Seabrooke & Milne 2009), videos (Martin et al. 2022) and a lecture style presentation (Teng and Friedman 2009). The effectiveness of interventions showed mixed result for help seeking behaviour which was influenced by ethnicity and only one study (Seabrooke & Milne 2009), investigated the impact of psycho-educational interventions on initial attendance rates and ongoing referrals making it difficult to draw conclusions.

Other interventions sought to provide information verbally alongside various other elements in healthcare settings, ensuring that information about mental health and available services is effectively conveyed during consultations (Hackett et al. 2009, Michelson and Day, 2014, Robidoux et al. 2023; Sanchez et al. 2002). The effectiveness of the interventions varied, with some showing positive outcomes such as increased help seeking intentions, improved initial and ongoing attendance rates when verbal information was provided, while others did not show significant differences in outcomes compared to control groups.

Cultural stigma surrounding mental health issues may deter individuals from ethnic minority groups from seeking help. Therefore, addressing stigma is crucial in improving access to mental health care (Aggarwal et al. 2016; Giebel et al. 2015). A number of interventions in this

review attempted to address stigma but this was not the main focus of the studies. For example, by normalising discussions about mental health (Arean et al. 2008), increasing understanding surrounding mental health issues (Teng and Friedman 2009) addressing misconceptions (Teng and Friedman 2009), encouraging individuals to feel more comfortable to seek help and engage in therapy without fear of judgment (Alvidrez et al. 2005; Hackett et al. 2009, Martin et al. 2022). Out of these studies, only one assessed stigma as an outcome, revealing that a psycho-educational intervention aimed at reducing depression stigma through a social-contrast based video was effective in enhancing help-seeking intentions and diminishing depression stigma in both Black and non-Black participants (Martin et al. 2022).

Mental health care providers may not be proficient in the languages spoken by ethnic minority groups in their community. This lack of language proficiency can hinder effective communication between the patient and the provider, making it difficult for the patient to express their thoughts, feelings, and concerns accurately (Aggarwal et al. 2016; Arundell et al. 2020; Giebel et al. 2015; Lock et al. 2023). This review identified six studies (Alvidrez et al. 2005, Teng and Friedman 2009, Mukadam et al. 2018, Robidoux et al. 2023; Ortega and Rosenbeck 2002; Sanchez et al. 2002) that incorporated language support into mental health interventions to improve accessibility and effectiveness for individuals from a diverse range of ethnic minority groups. The effectiveness of the interventions varied, with some showing positive outcomes such as increased intention to seek help or improved attendance and treatment response when provided in the patient's preferred language, while others did not show significant differences in outcomes compared to control groups. However, incorporating language support into mental health care settings is a vital step toward addressing communication barriers and promoting equitable access to mental health services for individuals from ethnic minority groups. A recent report by the Equality and Social Justice Committee (Welsh Parliament 2024) recommends providing translators to patients to help avoid overlooking health conditions, while also emphasising the need to eliminate the use of family members as interpreters in medical settings. The wider evidence based has established that the use of professional interpreters can improve the quality and appropriateness of care (Public Health Wales and Swansea University 2023). The HEAR 2 study which explored the health experiences of asylum seekers and refugees in Wales found that patient satisfaction with interpretation services if generally high although sometimes there were issues in terms of dialect, gender, or cultural specificity (Public Health Wales and Swansea University 2023).

Ethnic minority groups often have distinct cultural norms, beliefs, and values surrounding mental health. These cultural differences can affect how individuals perceive and experience mental health issues and influence their willingness to seek help from mainstream mental health services. Developing culturally tailored mental health interventions that resonate with the cultural values and beliefs of ethnic minority groups have the potential to improve engagement and outcomes (Aggarwal et al. 2016; Lock et al. 2023). Six studies incorporated various approaches to enhance the cultural competency of mental health services. For example training for healthcare professionals to offer culturally sensitive care and onward referral to appropriate services (Seabrooke & Milne 2009; Yeung et al. 2004), developing culturally appropriate services like the Pakistani link worker (Hackett et al. 2009), tailoring interventions to address unique cultural aspects, such as racism's impact on mental health for Black adolescent girls (Martin et al. 2022), utilising tools like the Cultural Formulation Interview (Sanchez et al. 2022), and customizing interventions to suit diverse cultural backgrounds (Michelson and Day 2014). These strategies aim to ensure that mental health services are sensitive, relevant, and effective across diverse cultural contexts. The effectiveness of these approaches varied across studies. While some interventions demonstrated positive outcomes, such as reduced depression stigma or improved attendance and treatment response when

services were provided in Spanish, others did not show significant impacts on attendance or clinical outcomes. Therefore, the effectiveness of cultural competency interventions in mental health services depends on various factors, including the specific intervention, target population, and context of implementation. It is important to consider that some interventions may have shown effectiveness if they had better study designs, larger sample sizes and accounted for confounding factors.

3.1 Strengths and limitations of the available evidence

A wide range of interventions targeted at different ethnic minority groups and age ranges were described in the identified evidence. However, although we searched for evidence for Gypsy, Traveller, and Roma groups we were unable to find any research for this specific population group. Most of the interventions were conducted in real-life clinical settings. While in some cases this limited the generalisability of results due to the clinics or patient populations having unique features, it also bridged the gap between intervention development and implementation and demonstrate how they were employed in practice. Due to the high variation in the interventions and contexts in which they were implemented, evidence for the effectiveness of each intervention was limited.

The studies had many methodological limitations. Out of the 14 included studies, only four were RCTs, with another six having no control group. Control groups were often historical rather than concurrent, which could introduce additional confounding factors. As a result of the quality appraisal, only two studies were rated high (Arean et al. 2008, Gorman et al 2021), with eight medium (Alvidrez et al. 2005; Evans et al. 2014; Martin et al. 2022; Michelson and Day 2014; Mukadam et al. 2018; Ortega & Rosenheck 2002; Sanchez et al. 2022; Yeung et al. 2004), and four receiving a low quality rating (Hackett et al. 2009, Robidoux et al. 2023, Seabrooke & Milne 2009, Teng and Friedman 2009) due to methodological weaknesses. In many of the included studies, study groups were not comparable, which meant that any differences in the outcomes could be attributed to the differences at baseline. Most studies did not use blinding, while in the remaining ones it was not possible to establish if they did. However, due to the nature of the interventions, blinding those receiving or delivering the intervention was not always possible or appropriate. While blinding those collecting and analysing outcome data might be feasible, it was not reported or discussed in the included studies. Another common issue was problems with data analysis, particularly the lack of adjustment for potential confounders. In some cases, only descriptive statistics were available. The issues outlined here weaken the evidence for the effectiveness of the intervention and the generalisability of the included studies.

3.2 Strengths and limitations of this Rapid Review

This review employed systematic search methods, which included searching five complementary bibliographic databases using a comprehensive search strategy and conducting forward and backward tracking of citations in the included studies. Error and bias in study selection were mitigated by two reviewers independently screening the full texts of all the articles that passed the initial screening. These strategies helped to maximise the amount of identified relevant evidence. All such evidence was critically appraised and included regardless of its methodological quality to provide a full account of the state of the literature on the topic, but methodological limitations were taken into consideration when reporting the results. A single critical appraisal tool was used for all studies, which allowed the comparison of methodological quality across the different study designs while taking design into account when conducting the appraisal.

This work also has a number of limitations arising from the time constraints associated with a rapid review. Grey literature, such as pre-prints and research reported in non-academic sources (e.g., reports) was not searched, so the extent of potential publication bias is not known. In order for the review to be completed within the given timeframe, the scope had to be limited to studies of interventions aimed at ethnic minority groups, which meant that studies with other potentially relevant populations which may have a high percentage of ethnic minorities (e.g., refugees and asylum seekers) were excluded.

3.3 Implications for policy and practice

Findings from this review can help to inform the development of the draft Mental Health and Wellbeing Strategy (2024-2034) and draft Suicide and Self-harm Prevention Strategy (2024/2034) - which are currently out to consultation.

In summary, the findings support the following:

- Psycho-educational interventions that utilise culturally appropriate delivery methods, such as leaflets, videos, or lectures to encourage health seeking behaviour amongst ethnic minority groups.
- The integration of speciality mental health services within primary care setting.
- The implementation of language support such as the use of professional interpreters to improve the accessibility for individuals with limited English proficiency.
- The provision of training to emphasise cultural sensitivity and competence among healthcare providers to address disparities in mental healthcare access and outcomes.

3.4 Implications for future research

The majority of studies included in the review lacked methodological rigor, had small sample sizes, and lacked of control groups. Future research should prioritise rigorous study designs, including randomised controlled trials and longitudinal studies, to provide robust evidence on the effectiveness of interventions targeting ethnic minority populations in mental health care.

Additional research is required to compare outcomes between ethnic minority participants and White participants, aiming to evaluate the effectiveness of interventions in mitigating disparities in access to and outcomes of mental health care.

3.5 Economic considerations*

- Mental Health problems cost the Welsh economy £4.8 billion per annum. Seventy-two percent of these incurred costs are attributed to productivity losses of people living with mental health conditions and costs experienced by unpaid informal carers (Mcdaid 2022).
- Ethnic minority individuals are disproportionately affected by economic determinants of poor mental health including increased likelihood of low income (Money and Mental Health Policy Institute 2023, Bansal et al. 2022).
- Future research should investigate the economic benefit to both an NHS and societal perspective of improving access to mental health services for ethnic minority communities

**This section has been completed by the Centre for Health Economics & Medicines Evaluation (CHEME), Bangor University*

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5. RAPID REVIEW METHODS

5.1 Eligibility criteria

Eligibility criteria for the review are presented in Table 4.

Table 4: Eligibility criteria

	Inclusion criteria	Exclusion criteria
Participants	People from ethnic minority groups* of all ages experiencing mental health conditions** Including dementia / Alzheimer's disease and perinatal mental health***	- International students - Refugees - Immigrants - Asylum seekers - Indigenous populations - All White British ethnicities other than Gypsy or Irish Travellers
Settings	Primary or secondary care	
Intervention / exposure	Interventions aimed at improving equitable or overall access to mental health services (including early access) For example: - Provision of mental health services and therapies - Pathways/routes into mental health support services - Onward referral to specialist mental health services	Interventions for: - Treating mental health conditions - Promoting good mental health - Preventing poor mental health -Improving medication adherence - Engagement in research - Participating, initiating or completing treatment - Cultural adaptations to treatment interventions
Comparison	Any	
Outcomes	Any outcome measure relating to the equitable or overall access of mental health services by ethnic minority groups. For example: - Uptake of the service by ethnic minority groups - Referral rates - Primary care use as a pathway to care by ethnic minorities	-Clinical effectiveness outcomes of mental health treatment - Effectiveness of mental health promotion and prevention interventions - Descriptions of barriers and facilitators
Study design	Quantitative empirical studies of an intervention with any type of control or comparison group, for example: - randomised control trials - quasi-experimental studies	- Quantitative empirical studies of an intervention without a control group - Qualitative studies - Secondary research
Countries	No limits	
Language of publication	English	
Publication date	No limits	
Publication type	Published and grey literature	Letters, commentary, editorials, conference abstracts, protocols, theses

*Ethnic minority groups of interest include Asian, Asian Welsh or Asian British (i.e., Bangladeshi, Chinese, Indian, Pakistani or any other Asian background), Black, Black Welsh or Black British (i.e., African, Caribbean or any other Black background), Arab, Gypsy, Travellers, Roma, mixed or multiple ethnic groups, or any other minority ethnic groups, excluding White British ethnicities not previously specified.

**For the purposes of searching, this included both common mental disorders (for example, anxiety and depression) and severe mental illnesses (for example bipolar disorder, schizophrenia and schizoaffective disorders, personality disorders, major depressive disorder, obsessive-compulsive disorder, psychosis and psychotic disorders, post-traumatic stress disorder, eating disorders, suicidal behaviour).

***While Dementia, Alzheimer's disease and perinatal mental health are not mental health conditions, these are included as they are of interest to policy development.

5.2 Literature search

5.2.1 Evidence sources

Comprehensive literature searches were conducted across the following bibliographic databases without any publication date limits: PsycINFO via OVID, Medline via OVID, Cinahl via EBSCO, Web of Science, and Cochrane Central Register of Controlled Trials (CENTRAL).

5.2.2 Search Strategy

Preliminary searches were undertaken during the development of the protocol in the Cochrane and NIHR Journals Library, Epistemonikos, JBI EBP database via Ovid, PubMed, Trip and PROSPERO databases using a combination of mental health terms (mental health OR psychological health OR mental illness OR bipolar OR schizophrenia OR psychosis OR depression OR anxiety OR post-traumatic stress disorder OT PTSD OR dementia OR alzheimer*), ethnicity terms (ethnic* OR minorit* OR racial*), intervention terms (intervention* OR improv*) and outcome terms (access* OR provision OR service* OR engag*). After that, targeted searches were conducted to identify literature focused on Gypsy, Traveller and Roma groups using specific search terms (gyps* OR roma OR romas OR romany OR romani OR romanis OR romanies OR traveler* OR traveller*).

Identified articles were then reviewed and analysed for the text words contained in the titles and abstracts. This informed the development of **a full search strategy designed on PsycINFO (on OVID) and adapted for other databases (see Appendix 1)**. The searches were conducted between 15th and 19th December 2023. Following database searches, forward and backward citation tracking were undertaken using citationchaser (Haddaway et al. 2022) and relevant studies were added to the review.

5.2.3 Reference management

All citations retrieved from the database searches were imported into EndNote™ (Thomson Reuters, CA, USA) and duplicates removed. At the end of this process, the citations that remained were exported as an TXT file and then imported to the software package Rayyan™, where any remaining duplicates will be removed.

5.3 Study selection process

Two reviewers dual screened at least 20% of citations using the information provided in the titles and abstracts using Rayyan™, resolving all conflicts where needed. The rest of the citations were screened by a single reviewer. For citations that appeared to meet the inclusion criteria, or in cases in which a definite decision could not be made based on the title and/or abstract alone, the full texts were retrieved. The full texts were then screened for inclusion by two reviewers and any disagreements resolved by a third reviewer. The flow of citations through each stage of the review process for each question are displayed in a PRISMA flowchart (Page et al. 2021).

5.4 Data extraction

All relevant data were extracted directly into tables by one reviewer and checked by another. The data extracted included specific details about the populations, including information about participants' demographics and mental health status, study methods, interventions and outcomes of significance to the review questions and objectives. A data extraction template

was developed and piloted for each of the included study designs. Minor amendments were made to the template as a result of the pilot.

5.5 Study design classification

We used the decision algorithm developed by Leatherdale (2019) to classify the research designs of the included studies

5.6 Quality appraisal

Eligible quantitative studies were assessed for risk of bias using the Academy of Nutrition and Dietetics **Quality Criteria Checklist (QCC)** (Academy of Nutrition and Dietetics 2022). Assessments were conducted by one reviewer and checked by a second, with any disagreements resolved by a third person. The checklist consists of 10 questions that address scientific soundness across a number of domains. The QCC tool can be applied to most quantitative study designs and is therefore suitable for reviews that include different study designs.

Based on responses to the 10 questions, a study is given an overall evaluation of positive, negative, or neutral. However, though for this review we adapted these to 'High', 'Medium' and 'Low' as per Duval et al. (2023).

- High: Strong quality - limited bias
  A study is given a high rating if the majority (6 or more) of the answers were 'yes' including criteria 1, 2, 3, and 4.
- Medium: Neither exceptionally strong nor exceptionally weak
  A study is given a medium if the answers to any of the first four validity questions (1-4) is "No" but other criteria indicate strengths.
- Low: Weak quality - likely bias
  A study is given a low rating if the majority (six or more) of the answers across the 10 validity questions are "No".

If any of the ten validity questions are marked ot applicable (N/A), the report requires a majority of "Yes" answers (including 1, 2, 3,4, as applicable) for a plus (+), or a majority or "No" answers for a minus (-) rating.

Studies were not excluded based on their risk of bias score. Methodological quality assessment was conducted by one reviewer and checked by a second, with any disagreements resolved by a third person.

5.7 Synthesis

The data is reported narratively as a series of thematic summaries (Thomas et al. 2017) and will be structured around the outcomes, target population characteristics, and type of intervention.

5.8 Assessment of body of evidence

The strength of the evidence (overall findings based on each outcome) was established and graded based on the quality, quantity and consistency of the available evidence (see Table 5), as well as the findings and the likely clinical impact (Academy of Nutrition and Dietetics 2022). Due to the heterogeneity between the included studies (i.e. each study evaluated a different intervention using different outcomes) this process was conducted at an individual study level. The Grade levels using this approach are as follows:

Grade I: Good / strong—The evidence consists of results from studies of strong design for answering the question addressed. The results are both clinically important and consistent with minor exceptions at most. The results are free of serious doubts about generalizability, bias, and flaws in research design. Studies with negative results have sufficiently large sample sizes to have adequate statistical power.

Grade II: Fair—The evidence consists of results from studies of strong design answering the question addressed, but there is uncertainty attached to the conclusion because of inconsistencies among the results from different studies or because of doubts about generalizability, bias, research design flaws, or adequacy of sample size. Alternatively, the evidence consists solely of results from weaker designs for the questions addressed, but the results have been confirmed in separate studies and are consistent with minor exceptions at most.

Grade III: Limited / weak—The evidence consists of results from a limited number of studies of weak design for answering the questions addressed. Evidence from studies of strong design is either unavailable because no studies of strong design have been done or because the studies that that have been done are inconclusive due to lack of generalizability, bias, design flaws, or inadequate sample sizes.

Table 5: Strength of evidence elements used to assign an overall GRADE level

Strength of Evidence Elements	GRADE		
	I **Good/Strong**	**II** **Fair**	**III** **Limited/Weak**
Quality Scientific rigor/validity Considers design and execution	Studies of strong design for question Free from design flaws, bias and execution problems	Studies of strong design for question with minor methodological concerns, OR Only studies of weaker study design for question	Studies of weak design for answering the question OR Inconclusive findings due to design flaws, bias or execution problems
Consistency Of findings across studies	Findings generally consistent in direction and size of effect or degree of association, and statistical significance with minor exceptions at most	Inconsistency among results of studies with strong design, OR Consistency with minor exceptions across studies of weaker design	Unexplained inconsistency among results from different studies OR single study unconfirmed by other studies
Quantity Number of studies Number of subjects in studies	One to several good quality studies Large number of subjects studied Studies with negative results have sufficiently large sample size for adequate statistical power	Several studies by independent investigators Doubts about adequacy of sample size to avoid Type I and Type II error	Limited number of studies Low number of subjects studied and
Clinical impact Importance of studied outcomes Magnitude of effect	Studied outcome relates directly to the question Size of effect is clinically meaningful Significant (statistical) difference is large	Some doubt about the statistical or clinical significance of the effect	Studied outcome is an intermediate outcome or surrogate for the true outcome of interest OR Size of effect is small or lacks statistical and/or clinical significance

6. EVIDENCE

6.1 Search results and study selection

The study selection process is shown in Figure 5. The searches identified 3,451 records across the five databases that were searched. Deduplication removed 1,093 records and a further 637 were removed by text mining. The title and abstracts of the remaining 1,721 records were screened and 1,655 were excluded as irrelevant to the review. The full papers of 66 records were retrieved and assessed for inclusion and a further 51 records were excluded. The details of these records and reasons for exclusion are shown in Appendix 2. The remaining 15 records met the inclusion criteria of the review and reported on 14 studies. Citation searching identified two additional records that were both companion papers to studies identified in the database searches and included in the review. Therefore, a total of 17 records were included, reporting on 14 studies.

6.2 Study designs

Four of the included studies were classified as RCTs (Arean et al. 2008, Martin et al 2022, Mukadam et al. 2018, Sanchez et al. 2022). Using the decision algorithm developed by Leatherdale (2019) the remaining search designs were classified below and also presented across Figures 1- 4.

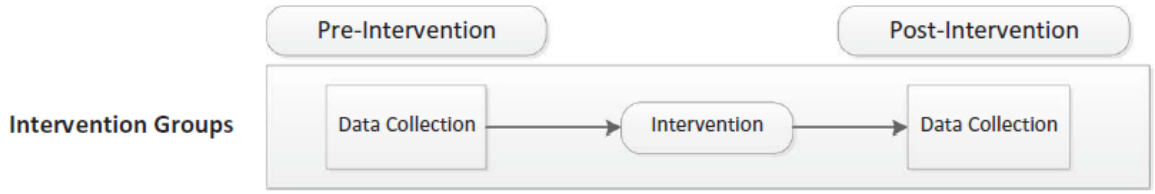
Cross-sectional post-test only quasi-experimental (four studies)
(Alvidrez et al. 2005, Evans et al. 2014; Gorman et al. 2021, Michelson and Day 2014).
One study collected data during a control group (Evans et al. 2014) and three studies compared the post-intervention data to data from historical comparison groups (Alvidrez et al. 2005; Gorman et al 2021; Michelson and Day 2014).

Figure 1: Cross-sectional post-test only quasi-experimental

(taken from Leatherdale 2019, Pg 26)

Repeat cross-sectional pre-post non-experimental studies (four studies).
(Hackett et al. 2009; Robidoux et al. 2023; Seabrooke and Milne 2009; Yeung et al. 2004).

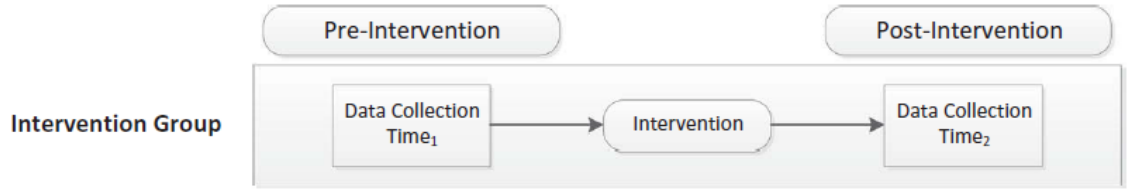
Figure 2: Repeat cross-sectional pre-post non-experimental



(taken from Leatherdale 2019, Pg 27)

Longitudinal pre-post non-experimental (one study).
(Teng and Friedman 2009)

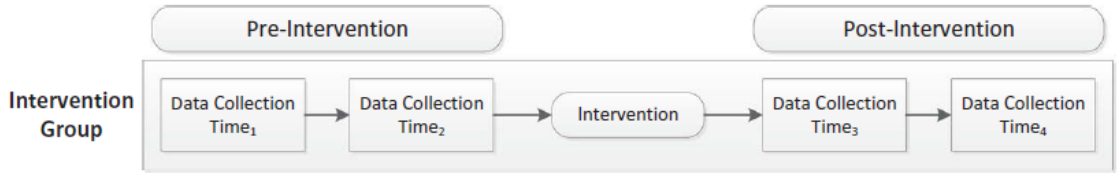
Figure 3: Longitudinal pre-post non-experimental



(taken from Leatherdale 2019, Pg27)

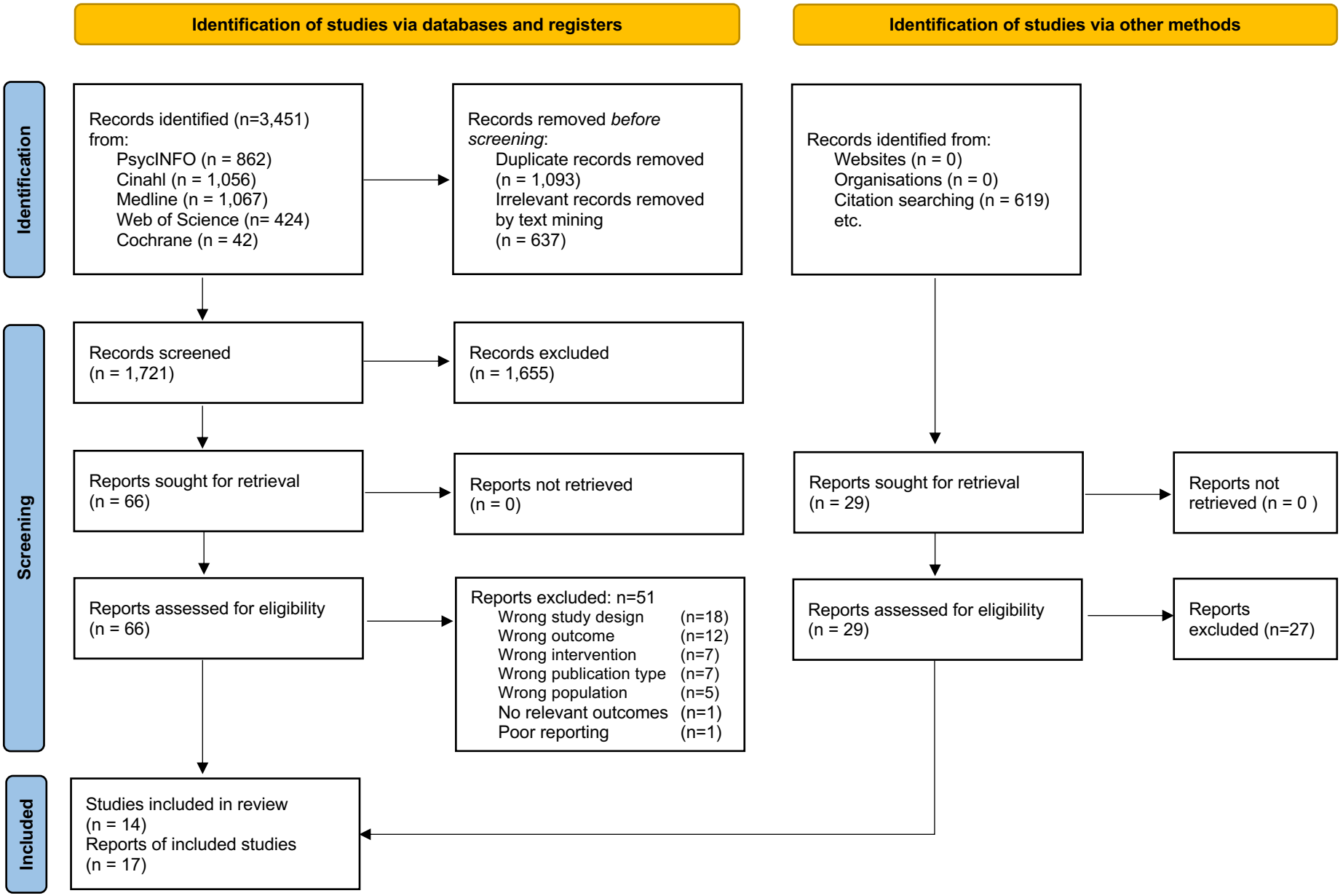
Longitudinal interrupted time series non-experimental (one study)
(Ortega & Rosenheck 2002).

Figure 4: Longitudinal interrupted time series non-experimental



(taken from Leatherdale 2019 Pg27)

Figure 5: PRISMA flow diagram of study identification



6.3 Data extraction

Table 6 below presents the characteristics of the included studies. The data includes bibliographic information and the country in which the study was conducted, aim/s, study details, including details of the study design and intervention as well as outcome measures, information about the participants and setting, results of the critical appraisal, and key findings.

Table 6: Characteristics of included studies

Citation (Country) **Aim/s**	**Study details**	**Participant details** **Setting** **Results of critical appraisal**	**Key findings**
Alvidrez et al. 2005 (USA) **Aim:** To examine the impact of a brief psycho-educational intervention on treatment entry and attendance for older African American medical patients referred for psychotherapy https://doi.org/10.1097/00019442-200507000-00003	**Study design:** Cross-sectional post-test only quasi-experimental (with historical comparison) Pilot study **Type of intervention:** 15-minute scripted individual psycho-education session before the day of their first scheduled psychotherapy appointment. The script then covered six topics 1) how a medical-model view of psychiatric disorders could reduce stigma 2) the specific conditions under which involuntary hospitalisation could occur 3) the importance of the patient's input in determining therapy goals and session topics 4) the importance of talking with the therapist about conflicts, misunderstandings, or dissatisfaction with the treatment process 5) how therapists could be different from their clients and still be helpful	**Participants:** African American medical patients (adults) referred for psychotherapy (n=69) IG (n=32) / HCG (n=37) **Participant details IG:** *Ethnicity:* African American (100%) *Gender:* Female (56%) *Age:(years):* 71.4±6.4 (range 61-86) *MH condition/s*: Mood disorders (59%) Problem drinking (19%) Both (6%) Did not meet criteria for an Axis I disorder (16%) **Participant details CG:** Ethnicity: African American (100%) *Gender:* Female (70%) *Age:* 72.4±10.1, (range 54 – 95) *MH condition:* Mood disorder (100%) **Setting:**	**Primary findings:** ***Proportion of patients starting therapy*** IG (75%) vs HCG (76%); p=0.95 ***Number of session attended (mean±SD)*** IG: 3.5±2.7 vs HCG: 1.9±1.4; p=0.05 **Additional findings:** ***Psycho educator ethnicity and proportion of patients starting therapy in the IG*** African American psycho educator (71%) vs Non-African American psycho educator (76%); p=0.8 ***Psycho educator ethnicity and number of sessions attended in the IG*** African American psycho educator (3.3±2.9) vs Non-African American psycho educator (4.2±1.9); p=0.45

	6) the receptivity of clinic therapists to discussing issues of religion/spirituality and incorporating them into the treatment Delivered by three research staff **Comparison:** A historical-comparison group that did not receive the intervention who had been refereed for psychotherapy in the 12 month period before study initiation **Data collection methods:** IG: Clinician treatment tracking logs HCG: Computerized appointment and billing records **Dates of data collection:** IG: April 2000 to June 2001 Comparison patients HCG: 12-month period before study initiation) **Outcome/s of interest:** *Primary outcome:* Treatment entry and attendance *Secondary outcome:* The impact of psycho educator ethnicity (African American or other) on treatment entry and attendance **Outcome measures:** Proportion of patients starting therapy Number of sessions attended over 3 months	A neighbourhood geriatric health clinic that had an on-site social services department where primary-care providers could refer patients for psychotherapy or other psychosocial services **Quality rating:** MEDIUM	
Arean et al. 2008[a] Ayalon et al. 2007[b] Levkoff et al. 2004 (USA)	**Study design:** RCT (secondary analysis of existing data)	**Participants:** Adults aged 65 and older diagnosed for depression, anxiety, and/or at-risk alcohol consumption (n=2,022[a] / n=155[b])	**Primary findings[1]:** ***% subjects having at least one mental health visit (aOR)[a]*** White: 23% IC, 12% ERC 2.23 (95% CI: 0.95, 5.22), *p*=0.0658

Aim: To compare mental health / substance abuse service integration in primary care to brokerage case management on: access to services treatment outcomes for older minorities and whites *The data extraction is based on Arean et al 2008 and supplemented with data from Ayalon et al 2007 where relevant* https://dx.doi.org/10.1002/gps.2100 [a] https://doi.org/10.1097/JGP.0b013e318135113e [b] https://doi.org/10.1177/0898264303260390	**Type of intervention:** Integrated care in a primary care clinics providing MH/SA services on-site as well as medication management, group, individual, and family psychotherapy, case management, and a brief behavioural alcohol intervention **Comparison:** Enhanced referral care - brokerage case management that linked patients to community-based services To enhance access to specialty MH/SA services by linking them more effectively to primary care Involving evaluation by the primary care provider, referral to a nurse or a medical social worker, an evaluation of needs and access use barriers, link to social services to overcome access barriers MH/SA services were provided in a separate location from the primary care clinics by licensed MH/SA providers, and included medication management, psychotherapy and Alcoholics Anonymous model treatment for heavy drinking **Data collection methods:** Service use outcomes were recorded by the treating provider (e.g., clinician or research assistant at the treatment site). Clinical outcomes data was collected by research assistants. Data were collected at baseline, 3 months, and 6 months **Dates of data collection:** Not stated but ≤2004	IC: n=999[a] / ERC: n=1,023[b] IC: n=82[b] / ERC: n=73[b] **Participant details: Total** *Ethnicity[a]:* White (51.7%) Black (24.7%), Latino (14.7%), Asian (5.5%), other (2.9%) Ethnicity[b]: White (42%), Black (58%) *Gender[a]:* Female (26.7%) Gender[b]: Female (64%) *Age (years)[a]:* 73±6.1 Age (years)[b]: 75 *MH condition/s[a]* Depression disorder (75.7%) Anxiety disorder (25.4%) At-risk drinking (27.8%) Dual diagnosis (7.3%) *MH condition/s[b]* Depression disorder (81.9%) Anxiety disorder (30.3%) Setting[a]: Ten primary care clinics: • five VA medical centres (one excluded from the analysis due to lack of patient-level randomisation) • three community mental health centres • two outpatient hospital networks Setting[b]: Ayalon et al. 2007 presents a sub-analysis of the data in Arean et al. 2008 (from one out of the 10 sites) **Quality rating:** HIGH	Black: 12% IC, 17% ERC 0.71 (95% CI: 0.14, 3.75), *p*=0.6890 Asian: 49% IC, 64% ERC 0.53 (95% CI: 0.37, 0.77), *p*=0.0009 Latino: 57% IC, 27% ERC 3.6 (95% CI: 2.22, 5.82), *p*<0.0001 Other: 30% IC, 19% ERC. 1.8 (95% CI: 0.6, 5.41), *p*=0.2924 ***% subjects having at least one mental health visit (aOR)[a]*** Black compared to White 0.32 (95% CI: 0.07, 1.52, p=0.1512) Asian compared to White 0.24 (95% CI: 0.09, 0.61, p=0.0026) Latino compared to White 1.62 (95% CI: 0.68, 3.84, p=0.2758) Other compared to White 0.81 (95% CI: 0.23, 2.81. p=0.7402) ***% subjects having at least one mental health visit (aOR)[b]*** White: 66.7% IC, 46.9% ERC 2.98 (95% CI: 0.98–9.06, p=0.05) Black: 77.5% IC, 22% ERC 14.13 (95% CI 4.76, –41.95, p<0.0001) ***Estimated number of time (days) to the first visit of any type (mean (SE))[a]*** White: 23.4 (3.1) IC, 34.31 (3.6) ERC, *p*=0.0568 Black: 24.77 (2.7) IC, 35.81 (1.0) ERC, *p*=0.0016 Asian: 20.02 (7.5) IC, 24.7 (9.9) ERC, *p*=0.4100 Latino: 27.37 (5.5) IC, 28.29 (4.3) ERC, *p*=0.8095 Other: 23.98 (8.3) IC, 32.03 (8.7) ERC, *p*=0.5747 ***Estimated number of time (days) to the first visit of any type (mean)[a]***

	Outcome/s of interest: Service use Depression Anxiety **Outcome measures:** Access: % subjects having at least one mental health visit Average number of visits Estimated number of time (days) to the first visit of any type CES-D (depression) BAI (anxiety) GHQ (distress – control variable)		Black compared to White -0.13 (95% CI: -9.97, 9.72. p=0.9800) Asian compared to White 6.23 (95% CI: -7.76, 20.22, p=0.3827) Latino compared to White 10 (95% CI: -3.49, 23.48. p=0.1462) Other compared to White 2.86 (95% CI: -29.44, 35.17, p=0.8621) ***Estimated number of time (days) to the first visit of any type (Mean±SD / aHR)[b]*** White: 22.18±33.88 IC, 63.46±32.41 ERC 2.48 (95% CI: 1.20–5.13, p=0.01) Black: 31.06±28.66 IC, 62.45±43.53 ERC 7.82 (95% CI 3.65–16.75, p<0.0001) ***Average number of visits (Mean (SE))[a]*** White: 3.24 (0.2) IC, 1.95 (0.4) CG, *p*=0.0194 Black: 2.72 (0.4) IC, 1.38 (0.2) ERC, *p*=0.0036 Asian: 2.49 (1.5) IC, 4.36 (1.2) ERC, *p*=0.0052 Latino: 3.1 (0.2) IC, 1.53 (0.2), ERC, *p*<0.0001 Other: 3.03 (0.6) IC, 2.98 (1.2) ERC, *p*=0.9748 *Average number of visits (Mean (SD / aIRR)[b]* IC: White 2.75±4.29, Black 3.22±3.71, 0.58 (95% CI: 0.25–1.33, p=0.20) ERC: White 5.31±7.76, Black 2.08±5.28 2.87 (95% CI 1.06–7.73, p=0.03) ***Average number of visits (Mean)[a]*** Black compared to White 0.06 (95% CI: 0.93, 1.04, p=0.9105 Asian compared to White 3.15 (95% CI:-4.45, 1.86, p<0.0001) Latino compared to White

			0.29 (-0.53, 1.12, p=0.4844) Other compared to White -1.23 (-3.64, 1.18, p=0.3468) **Additional findings:** ***Depression scores (mean (SE)[a]*** White: 20.09 (0.5) IC, 19.44 (0.5) ERC, p=0.2893 Black: 19.23 (0.7) IC, 19.89 (0.7) ERC, p=0.4134 Asian: 23.9 (2.1) IC, 23.13 (2.1) ERC, p=0.6334 Latino: 20.13 (1.0) IC, 20.49 (1.0) ERC, p= 0.7115 Other : 20.49 (1.6) IC, 22.78 (1.8) ERC, p=0.3270 ***Depression scores (mean difference)[a]*** Black compared to White -1.3 (95% CI: -3.28, 0.68, p=0.1968) Asian compared to White 0.12 (95% CI: -3.24, 3.48, p=0.9434) Latino compared to White -1 (95% CI: -3.26, 1.25, p=0.3831) Other compared to White -2.93 (95% CI: -7.66, 1.8, p=0.2244) ***Anxiety scores (mean SE))[a]*** White: 14.87 (0.7) IC, 13.88 (0.8) ERC, p=0.2520 Black: 14.57 (1.1) IC, 14.71 (1.0) ERC, p=0.9057 Asian: 16.34 (3.2) IC, 13.85 (2.9) ERC, p=0.3362 Latino: 15.48 (1.9) IC, 13.82 (1.6) ERC, p=0.3873 Other: 13.7 (2.3) IC, 15.79 (2.3) ERC, p=0.5029 ***Anxiety scores (mean difference)[a]*** Black compared to White -1.14 (95% CI:,-4.07, 1.79, p=0.4453) Asian compared to White 1.5 (95% CI: -3.87, 6.87, p=0.5832)

			Latino compared to White 0.66 (95% CI: -3.45, 4.77, p= 0.7526) Other compared to White -3.09, (95% CI: -9.47,3.29, p=0.3416)
Evans et al. 2014 (UK) **Aim:** To evaluate the effect of locating mental health link workers in general practitioners' surgeries on referral of Black and Minority Ethnic patients to IAPT services https://doi.org/10.1080/17571472.2014.11493409	**Study design:** Cross-sectional post-test only quasi-experimental (with control group) **Type of intervention:** GP practices with a link worker (n=6) Use of mental health link workers in GP surgeries Link workers were placed in the six intervention practices in a staggered manner, starting from the first pilot link worker in January 2009, after which a link worker was added to one practice in April 2010, September 2010 and September 2011 each and to two practices in December 2011 **Control:** GP practices without a link worker (n=17) **Data collection methods:** Referral data were collected weekly for each Southall GP practice **Dates of data collection:** April 2010 to March 2012 **Outcome/s of interest:** Referrals to the IAPT service **Outcome measures:** Referral rates (per 10,000 practice population)	**Participants:** Black and Minority Ethnic patients referred to IAPT services (n=NR) **Participant details:** Ethnicity: Black and minority ethnic (100%) No further details provided **Setting:** GP practices in Southall, Ealing, a diverse ethnic community; with a population of around 65,000 and over 70% of the population classified as having a Black and Minority Ethnic background **Quality rating:** MEDIUM	**Primary findings:** The mean referral rate of Black and Minority Ethnic patients (standardised to the size of the population served by practices) for GP practices without a link worker was 0.35 Black and Minority Ethnic referrals per week per 10,000 patients and was unchanged throughout the period of the study Referral rates from the practices with a link worker were 0.65 per 10,000 practice population at the start of data collection (January 2010, a year after the first pilot link worker was placed), and increased to 1.37 patients per 10,000 practice population in July 2010, when a second link worker had been placed, but before the other four. This referral rate remained stable until the end of the study despite the addition of more link workers

Gorman et al. 2021 (USA) **Aim:** To examine the impacts of a medical assistant screening protocol on the rates of depression screening overall and by sociodemographic groups, in a primary care setting https://doi.org/10.1016/j.amepre.2021.05.010	**Study design:** Cross-sectional post-test only quasi-experimental (with historical comparison) Pilot study **Type of intervention:** Medical assistants performed screening for depression of eligible patients using a standardized protocol Patients were due for screening if they had not received depression screening within the previous 12 months, did not have a current diagnosis of depression or bipolar disorder, or did not have a previous positive depression screening A passive alert Best Practice Advisory was active in the Epic electronic health record to remind physicians and medical assistants whether a patient was due for depression screening The alert included a link to a smart flow sheet for the Patient Health Questionnaire which is a validated and widely used screening tool consisting of 2 questions Medical assistants were provided training in how to administer the questionnaire 2, along with in-clinic support and posted reminders **Comparison:** Historical-comparison group Physicians only undertook screening for depression and the same alerting system was in place along with completion of the questionnaire	**Participants** Patients at an adult internal medicine and an internal medicine/paediatrics practice. 45,157 visits by 21,377 unique patients **Participant details IG (18,649 visits)** *Ethnicity:* Black/African American (63%); White (28%); Asian (4%); other (3%); unknown (2%) *Gender:* Female (61%) *Age (years): 18-39 (18%); 40-64 (41%), ≥65 (41%)* *MH condition/s:* N/A **Participant details CG (26,498 visits)** *Ethnicity:* Black/African American (67%) White (26%); Asian (4%); Other (2%); unknown (2%) *Gender:* Female (63%) *Age (years*): 18-39 (15%); 40-64 (41%) ≥65 (44%) *MH condition/s:* N/A **Setting:** Two primary care practices An adult internal medicine and an internal medicine/paediatrics practice at an urban academic medical centre (primary care setting) **Quality rating:** HIGH	**Primary findings:** ***Overall depression screening rates (unadjusted)*** Physician-only (18%) vs medical assistant protocol (57%); p<0.0001 **Depression screening rates by race (unadjusted)** Asian: Physician-only (27%) vs medical assistant protocol (64%); p<0.0001 Black/African American: Physician-only (17%) vs medical assistant protocol (57%); p<0.001 Other: Physician-only (21%) vs medical assistant protocol (59%); p<0.001 White: Physician-only (20%) vs medical assistant protocol (56%); p<0.001 ***Depression screening rates by race (adjusted)*** [2] Physician-only: Asian compared to White OR 1.31, 95% CI:1.11, 1.55, p=0.001 Medical assistant protocol: Asian compared to White OR 1.28, 95% CI: 1.09, 1.50, p=0.003 Physician-only: Black / African American compared to White OR 0.91; 95% CI: 0.84, 0.99, p=0.002 Medical assistant protocol: Black / African American compared to White OR 1.11, 95% CI:1.02, 1.20, p=0.01 Physician-only: Other compared to White OR 1.00, 95% CI: 0.80, 1.26, p=1 Medical assistant protocol: Other compared to White OR 1.06, 95% CI: 0.87, 1.31, p=0.56 **Additional findings:** ***Depression screening by gender (adjusted)*** Physician-only: Female compared to male OR 0.91, 95% CI: 0.85, 0.98, p=0.01

	Data collection methods Electronic health records **Dates of data collection:** IG: (Sept 2017–August 2018) CG: (Sept 2016–August 2017) **Outcome/s of interest:** Depression screening **Outcome measures:** Rates of depression screening using the Patient Health Questionnaire-2		Medical assistant protocol: Female compared to male OR 1.07, 95% CI: 1.0002, 1.14, p=0.049 ***Depression screening by age (adjusted)*** Physician-only: 40-64 compared to 18-39 OR 0.88, 95% CI: 0.80, 0.97, p=0.01 Medical assistant protocol: 40-64 compared to 18-39 OR 91, 95% CI: 83, 0.998, p=0.045 Physician-only: ≥65 compared to 18-39 OR 0.66, 95% CI: 0.59, 0.73, p=<0.0001 Medical assistant protocol: ≥65 compared to 18-39 OR 0.78, 95% CI: 0.71, 0.85, p=<0.001
Hackett et al. 2009 (UK) **Aim:** To empower the Pakistani community to seek mental health support earlier within their own community, build up trust in mainstream services and enhance the clinical pathways within services to provide more culturally appropriate care https://dx.doi.org/10.1080/09540260903163366	**Study design:** Repeat cross-sectional pre-post non-experimental (no control group) **Type of intervention:** Enhancing Pathways Into Care (EPIC) including a range of strategic and clinical interventions -Better information more intelligently used -Community engagement (CRHT joining with a community organisation called Pakistani Muslim Center, which resulted in the development of a Pakistani link worker; running a national EPIC event) -More appropriate and responsive services (core project team that could 'champion' the project and who reflect multidisciplinarity) The project was in active development in 2006 **Data collection methods:** Clinical database review	**Participants** Pakistani community in mental health crisis (2005 – 2006) Sheffield Psychiatric Inpatient Admissions British Asian/Asian Pakistani (3.9%) CRHT Total Episodes British Asian/Asian Pakistani (2.9%) CRHT Home treatment British Asian/Asian Pakistani (3.6%) **Participant details:** *Ethnicity:* Pakistani (100%) *No further details reported* *MH condition/s:* Mental health crisis, but no specific condition is detailed **Setting:** Sheffield CRHT These teams act as the gatekeepers to acute psychiatric services and aim to provide home treatment for people in crisis, as far as possible, as well as supporting early discharge for those admitted into inpatient beds	**Primary findings:** **Pakistanis referred to CRHT in crisis** Pre EPIC (2005): (2.6%) / Post EPIC (2006): (3.2%) **Pakistanis receiving Home Treatment** Pre EPIC (2005): (3.8%) / Post EPIC (2006): (3.4%) **Pakistanis admitted to hospital** Pre EPIC (2005): (4.0%) / Post EPIC (2006): (3.8%) **Referred to Pakistani Muslim Centre from Home Treatment** Pre EPIC (2005): n=1 / Post EPIC (2006): n=7 **Referred to Pakistani Muslim Centre from Inpatient ward** Pre EPIC (2005): n=0 / Post EPIC (2006): n=9 **Admissions to the acute inpatient setting for Pakistani patients** There were minimal fluctuations in numbers and proportional percentages admitted for 2002–2006. 2002 n=26 (2.7%) / 2003 n=31 (3.2%) / 2004 n=35 (3.9%) 2005 n=33 (4.0%) / 2006 n=32 (3.7%) **Average length of stay in inpatient setting by ethnic group from 2002 to 2006**

	Case note review using Standards of Care Checklist Qualitative data collection from the link worker Pre intervention data for patients referred by the Adult Medicine Department was collected in the 12 months prior to the project **Dates of data collection:** 2002-2006 clinical database review 2005-2006 case note review **Outcome/s of interest:** Clinical pathways Patterns of access Length of stay **Outcome measures:** Percentage service use - referred to CRHT in crisis - receiving Home Treatment - referred to Pakistani Muslim Centre from home treatment or inpatient wards Admissions to the acute inpatient setting Average length of stay	**Quality rating:** LOW	Larger degree of variability and an overall longer length of stay for the Pakistani group as compared to the other ethnic groups All groups, however, show an overall trend (smoothing variability) for reduction in length of stay across the five-year period
Martin et al. 2022 (US) **Aim:** To test the utility of brief social contact–based video interventions of a Black adolescent girl to reduce stigmatised attitudes and increase help-seeking intentions around adolescent depression	**Study design:** RCT **Type of intervention:** Social-contact based video intervention Each video lasted 117s – interviews with a 16-year-old Black female actor. IG1: Video 1 (“Depressed”): The videos address difficulties coping with depressive symptoms, thoughts that life is not worth living, false assumptions about treatment,	**Participants** Healthy adolescents aged 14-18 years (n=1093) IG (=448) / IG2 (n=456) / CG (n=189) **Participant details IG1** *Ethnicity:* White (58%); Black (17%); other (23%); Prefer not to say (3%) *Gender:* Female (45%); Nonbinary (10%) *Age:* 16.8±1.1	**Primary findings:** **Help-seeking intentions (mean±SD, p value corrected to 0.001):** Emotional Problems subscale: *Help from mental health professional* IG1: Baseline: 3.37±1.3 / Post: 3.58±1.35, p<0.001 IG2: Baseline: 3.34 ± 1.32 / Post: 3.47±1.38, p>0.05 CG: Baseline: 3.38 ± .29 / Post: 3.37±1.33, p>0.05 *Help from doctor/GP* IG1: Baseline: 2.89±1.35 / Post: 3.20±1.35, p<0.001 IG2: Baseline: 2.84±1.29 / Post: 2.99± 1.38, p<0.001

https://dx.doi.org/10.1111/jcpp.13570	and how and when she decided to seek help IG2: Video 2 ("Depressed adjusted"): is adjusted to aspects unique to being a Black adolescent girl (e.g., experienced or internalised racism) **Control** CG: Video 3 (control): describes hobbies and lacks the description of depressive symptoms or any other mental health–related content **Data collection methods** Questionnaires **Dates of data collection:** N/R **Outcome/s of interest:** Treatment-seeking intentions Stigma toward depression **Outcome measures:** General Help-Seeking Questionnaire Depression Stigma Scale (only the personal subscale)	**Participant details IG2** *Ethnicity:* White (61%); Black (18%); other (17%); prefer not to say (4%) *Gender:* Female (47%); Nonbinary (8%); Prefer not to say (1%) *Age:*16.8±1.1 *Mental health condition/s*[3]*: N/A* **Participant details CG** *Ethnicity:* White (57%); Black (22%); Other (17%); Prefer not to say (4%) *Gender:* Female (43%); Nonbinary (10%); Prefer not to say (3%) *Age: 16.8±1.2*) *Mental health condition/s*[3]*:* N/A **Setting:** Online crowdsourcing platform **Quality rating:** MEDIUM	CG: Baseline: 2.88±1.28 / Post: 2.89±1.35, p>0.05 Suicidal Thoughts subscale *Help from mental health professional* IG1: Baseline: 3.32±1.43 / Post: 3.54 ±1.41, p<0.001 IG2: Baseline: 3.28±1.47 / Post: 3.40±1.49, p>0.05 CG: Baseline: 3.33±1.39 / Post: 3.25±1.41, p>0.05 *Help from doctor/GP* IG1: Baseline: 2.81±1.42 / Post: 3.25± 1.43, p<0.001 IG2: Baseline: 2.79±1.40 / Post: 2.99±1.49, p<0.001 CG: Baseline: 2.93±1.39 / Post: 2.99±1.44, p>0.05 Post hoc analyses did not reveal difference across gender or race in a preferred source for seeking help from.[4] **Additional findings:** **Stigma towards depression (mean±SD, p value corrected to 0.001):** *Black* IG1: Baseline: 20.14±5.95 / Post: 19.01±6.23, *p*=0.01 IG2 Baseline:19.75±6.20 / Post: 18.23±6.46 / *p*<0.001 CG: Baseline:20.19±5.77 / Post: 19.21±5.97 / *p*=0.038 *Non-Black* IG1: Baseline: 17.43±5.26 / Post: 16.05±5.30 / *p*<0.001 IG2: Baseline: 17.98±5.22 / Post: 15.94±5.38 / *p*<0.001 CG: Baseline: 17.01±4.87 / Post: 16.36±5.73 / *p*=0.011 Black participants had higher stigma scores at baseline than non-Black participants (20.00 ± 5.99 vs. 17.59 ± 5.19, p<0.001) The interaction between race and intervention was significant (p <0.001), revealing different response profiles for Black (IG1 = IG2 = CG, p=0.726) and non-Black participants (IG2 >IG1> CG; p<0.001)
Michelson and Day 2014	**Study design:**	**Participants**	**Primary findings:**

(UK) **Aim:** To develop and evaluate an engagement intervention with specific applicability to ''real-world'' CAMHS in a socially deprived, ethnically diverse locality within the UK https://doi.org/10.1007/s10488-012-0462-4	Cross-sectional post-test only quasi-experimental (historical comparison) Pilot study **Type of intervention:** Pre-intake engagement intervention targeting families: 20–30 min telephone conversation with a parent during which a key worker attempted to systematically identify and address possible barriers to initial attendance Practitioners working in schools were also given the option to deliver the intervention face-to-face on school premises **Control:** CG1: eligible participants who did not complete the intervention due to non-engagement and received standard clinic procedure (opt-out letters) CG2: historical, families who received standard clinic procedure (opt-out letter) six months prior to the intervention **Data collection methods** Programmed outputs from electronic patient records **Dates of data collection:** Not reported **Outcome/s of interest:** Attendance at appointments **Outcome measures:**	Parental caregivers of all children and adolescents referred to and accepted in a children and adolescent mental health services (n=332) IG: (n=107) / CG1 (n=62) / CG2: (n=163) **Participant details IG** *Ethnicity:* Black and Minority Ethnic (64.3%)[5] *Gender:* Female (31.8%) *Age (years):* 10.36±3.37 *MH condition/s:* Psychotic disorders (0%); mood disorders (3.7%); anxiety, stress-related and attachment disorders (7.5%); developmental disorders (0.9%); emotional and behavioural disorders of childhood (15.9%); unspecified mental disorder (1.9%); no Axis 1 diagnosis (15.9%); not coded (54.2%) **Participant details CG1** *Ethnicity:* Black and Minority Ethnic (72.9%)[6] *Gender:* Female (48.4%) *Age (years):* 9.78±3.88 *MH condition/s:* Psychotic disorders (0%); mood disorders (1.6%); anxiety, stress-related and attachment disorders (4.8%); developmental disorders (0%); emotional and behavioural disorders of childhood (12.9%); unspecified mental disorder (1.6%); no Axis 1 diagnosis (22.6%); not coded (56.5%) **Participant details CG2** *Ethnicity:* Black and Minority Ethnic (61.6%)[7] *Gender:* Female (41.1%)	**First appointment outcomes** Attended: IG (57.9%) vs CG1 (24.2%); p<0.001 IG (57.9%) vs CG2 (58.3%); p=0.96 DNA: IG (10.3%) vs CG1 (54.8%); p<0.001 IG (10.3%) vs CG2 (20.9%); p<0.05 Cancelled IG (13.1%) vs CG1 (14.5%); p=0.79 IG (13.1%) vs CG2 (9.2%); p=0.31 Discharged / not seen IG (18.7%) vs CG1 (6.5%); p<0.05 IG (18.7%) vs CG2 (11.7%); p=0.11 **Outcomes within first three scheduled appointments** Attended at least once: IG (73.8%) vs CG1 (53.2%); p<0.01 IG (73.8%) vs CG2 (74.8%); p=0.85 DNA at least once*:* IG (22.4%) vs CG1 (59.7%); p<0.001 IG (22.4%) vs CG2 (35.0%); p<0.05 Cancelled at least once: IG (19.6%) vs CG1 (30.6%); p=0.10 IG (19.6%) vs CG2 (20.9%); p=0.81 Discharged: IG (53.3%) vs CG1 (58.1%); p=0.55 IG (53.3%) vs CG2 (43.6%); p=0.12 **DNA rate (first appointment) and** Black and Minority Ethnic **status** IG: Black and Minority Ethnic (11.1%) vs White (11.4%); p=0.96 CG1: Black and Minority Ethnic (60.0%) vs White (46.2%); p=0.39 CG2: Black and Minority Ethnic (34.4%) vs White (32.8%); p=0.91

	Attendance at first, second, and third appointment (did not attend, attended, cancelled)	*Age:* 9.97±3.85 *MH condition/s:* Psychotic disorders (0.5%); mood disorders (3.3%); anxiety, stress-related and attachment disorders (11.7%); developmental disorders (2.8%); emotional and behavioural disorders of childhood (25.7%); unspecified mental disorder (0.5%); no Axis 1 diagnosis (20.6%); not coded (34.1%) **Setting:** An inner-city CAMHS team that serves one of the most deprived and ethnically diverse boroughs in England. The team offers clinic- and community-based early intervention services for youth aged up to 18 years **Quality rating:** MEDIUM	**Additional findings:** **DNA rate and socio-economic deprivation: Mean Index of Multiple Deprivation Score (IMD)** IG DNA (37.73) vs.no DNA (35.85); p=0.47 CG1 DNA (37.72) vs. no DNA (36.11); p=0.49 CG2 DNA (38.90) vs. no DNA (38.79); p=0.95
Mukadam et al. 2018 Mukadam 2017 (UK) **Aim:** To develop an intervention to encourage people from South Asian backgrounds to seek help earlier for memory problems and test its acceptability and feasibility https://dx.doi.org/10.1017/S1041610217002307 https://discovery.ucl.ac.uk/id/eprint/1560934/	**Study design:** Cluster RCT **Type of intervention:** A trilingual digital versatile disc (DVD) and a bilingual leaflet intervention emphasizing that dementia is a physical illness and the benefits of early help-seeking for memory problems in South Asians. This could be played In English, Bengali or Sylheti. This was posted out by the GP with a letter on headed paper that explained the importance of certain health topics within the South Asian community and advised participants to look at the enclosed information leaflet which was in English and Begali **Control:**	**Participants** South Asian adults without known dementia aged > 50 (n=78) IG (n=41) / CG (n=37) **Participant details I** *Ethnicity:* South Asian (100%) Gender: Females (44%) Age (years: 64.5±10.0 MH condition/s: N/A **Participant details CG** *Ethnicity:* South Asian (100%) *Gender:* Females (57%) *Age (years):*63.6±10.6 *MH condition/s:* N/A	**Primary findings:** **Viewing the intervention** 17/41 (41%) accessed the intervention Of these 17 people, 10 looked only at the leaflet, three only looked at the DVD and four people looked at both leaflet and DVD **Change in peoples' perceptions about dementia** Subscale/ Total scores APEND questionnaire (mean±SD) Intention time 1: IG: 6.0±5.1 / CG 6.5±3.4 Intention time 2: IG 6.2 ±5.2 / CG 6.9±3.0 Behavioural attitudes time 1: IG: 3.5±3.6 / CG 4.4±2.6 Behavioural attitudes time 2: 3.4±3.8 / CG: 4.1±.3.2 Subjective Norms time 1: IG: 4.0+2.7 / CG 4.4+2.1 Subjective Norms time 2: IG: 4.6+2.3 / CG 4.2+2.4 Perceived behavioural control time 1: IG 5.0±4.2 / CG 6.1±3.1

	No DVD/leaflet information sent **Data collection methods** Follow-up questionnaire three months after the initial visit **Dates of data collection:** N/R **Outcome/s of interest:** Perceptions about seeking help for dementia **Outcome measures:** Behavioural intention - change in peoples' perceptions about seeking help for dementia using the APEND (Attitudes of People from Ethnic Minorities to help-seeking for Dementia) questionnaire Dementia Knowledge Questionnaire	**Setting:** Greater London primary care (eight GP practices) **Quality rating:** MEDIUM	Perceived behavioural control time 2: IG 6.1±4.2 / CG 6.1±3.2 Total score time 1: IG 18.5±13.8 / CG: 21.4±9.1 Total score time 2: IG: 20.3±13.3 / CG) 21.3± 9.2 Behavioural intention scores did not differ significantly between IG and CG (Parameter estimate -0.5, 95% CI -2.2 to 1.2, p=0.56) Post hoc analysis of behavioural Intention between CG and IG (only including those in the IG who said they had viewed the intervention) - the mean difference on the intention subscale was significantly higher (IG 0.5 points higher; U=212.5, *Z*=−2.1, p=0.037) Subjective Norm scores did not differ significantly IG and CG over time (Parameter estimate -0.01, 95% CI -0.95 to 0.93, p=0.99) There were no significant effects on score of any of the other covariates In order to explore whether this finding could be due to demographic confounders, we compared those who said they viewed the intervention with the control group and found no significant differences between the two groups on age, gender, years of education, occupational classification, and number of years in the UK or experience of dementia **Additional findings:** *Dementia knowledge* The mean score was higher in the CG at both time points (Mean 6.8/19 vs 5.3 at T1 and 7.9 vs 6.6 at follow-up) but this was only statistically significant at the first time point (Mean difference 1.6 points, p=0.043) and both groups of scores increased from the first to second time points
Ortega and Rosenheck 2002 (USA)	**Study design:** Longitudinal interrupted time series non-experimental	**Participants**	**Primary findings:** *Outpatient psychiatric services* *Mean (SE) change scores at 12-month follow-up:*

Aim: To examine the effects of client-case manager ethnic and racial matching among white and Hispanic clients who received assertive community treatment https://dx.doi.org/10.1097/00005053-200205000-00008	(no control group) **Type of intervention:** Client-clinician ethnic and language matching performed within a case management intervention that relied on principles of ACT, which include assertive engagement, high intensity of service, small caseloads, expanded hours of operation, a multidisciplinary team approach, and services provided within the community **Data collection methods** Self-reported scales Structured interviews **Dates of data collection:** 3 years (1994-1997) Baseline and 12 months follow-up (data also collected at 3 months follow-up but not reported) **Outcome/s of interest:** General psychiatric problems Depression Symptoms of psychosis Service use - Outpatient psychiatry - Medical-surgical services - Substance abuse services - Service integration **Outcome measures:** Addiction Severity Index (general psychiatric problems, alcohol problems, drug problems) Diagnostic Interview Schedule (depression) Service usage questionnaire	White and Hispanic homeless clients with severe mental illness in ongoing community treatment (n=2575) White clients (n=2333) Hispanic clients (n=242) **Participant details -**White clients (91%) *Gender:* Female (11%) *Age (years) mean (SE):* 39.5 (0.22) *MH condition/s:* mean (SE) Psychiatric problems: 0.51 (0.01) Depression: 3.1 (0.04) Psychosis symptoms: 9.2 (0.18) Alcohol problems: 0.13 (0.00) Drug problems: 0.05 (0.00) **Participant details -**Hispanic clients (9%) *Gender:* Female (7%) *Age (years) mean (SE):* 37.8 (9.6) *MH condition/s: mean (SE)* Psychiatric problems: 0.58 (0.02) Depression: 3.6 (0.13) Psychosis symptoms: 14.9 (0.57) Alcohol problems: 0.15 (0.01) Drug problems: 0.08 (0.01) **Setting:** Access to Community Care and Effective Services and Supports Program across 18 sites in 15 cities **Quality rating:** MEDIUM	White case managers: White clients: 1.54 (0.29) / Hispanic clients: 1.98 (1.12) Black case managers: White clients: 0.82 (0.56) / Hispanic clients: -0.33 (1.73) Hispanic case managers: White clients: 2.48 (0.95) / Hispanic clients: 0.43 (1.55) Comparison: - Case manager race: p=0.37 - Client race: p=0.96 - Interaction of client and case manager race: p=0.94 *Medical-surgical services* *Mean (SE) change scores at 12-month follow-up:* White case managers: White clients: 0.25 (0.12) / Hispanic clients: -0.24 (0.47) Black case managers: White clients: -0.19 (0.23) / Hispanic clients: -0.48 (0.73) Hispanic case managers: White clients: 0.08 (0.40) / Hispanic clients: 0.65 (0.65) Comparison: - Case manager race: p=0.44 - Client race: p=0.87 - Interaction of client and case manager race: p=0.49 *Substance abuse services* *Mean (SE) change scores at 12-month follow-up:* White case managers: White clients: -0.28 (0.17) / Hispanic clients: -0.45 (0.66) Black case managers: White clients: -0.68 (0.33) / Hispanic clients: -0.64 (1.02) Hispanic case managers: White clients: -0.55 (0.56) / Hispanic clients: -0.50 (0.91) Comparison: - Case manager race: p=0.89 - Client race: p=0.97 - Interaction of client and case manager race: p=0.98

	23 questions concerning use of various types of health and social services during the 60 days before the interview, such as: - number of days receiving acute psychiatric care - number of days receiving assistance for a psychiatric problem -- number of days receiving care from a doctor, nurse, addictions counselor, case manager, or any other type of outpatient staff for an alcohol or other drug problem Service integration measure (scale from 0 to 6), where 1 point was given for use of each of the below - a public housing agency - mental health services - general health care - substance abuse services - public support payment - vocational rehabilitation		*Service integration* *Mean (SE) change scores at 12-month follow-up:* White case managers: White clients: 0.46 (0.03) / Hispanic clients: 0.44 (0.12) Black case managers: White clients: 0.44 (0.06) / Hispanic clients: 0.07 (0.19) Hispanic case managers: White clients: 0.49 (0.10) / Hispanic clients: 0.11 (0.17) Comparison: Case manager race: p=0.18 - Client race: p=0.01 - Interaction of client and case manager race: p=0.15 Aggregate by race: [8] - White clients: 0.46 (0.04) / Hispanic clients: 0.21 (-0.09), p=0.01 **Additional findings:** *Psychosis symptoms* *Mean (SE) change scores for at 12-month follow-up:* White case managers: White clients: -44.11 (0.18) / Hispanic clients: -3.62 (0.68) Black case managers: White clients: -4.50 (0.34) / Hispanic clients: -2.16 (1.04) Hispanic case managers: White clients: -33.60 (0.57) / Hispanic clients: -11.76 (0.93) Comparison: - Case manager race: p=0.002 - Client race: p=0.001 - Interaction of client and case manager race: p=0.001 Aggregate by race: White clients: -4.07 (0.22) / Hispanic clients: -1.34 (0.52), p=0.0001 *Psychiatric problems* *Mean (SE) change scores for at 12-month follow-up:*

			White case managers: White clients: -00.15 (0.01) / Hispanic clients: -00.15 (0.02) Black case managers: White clients: -00.16 (0.01) / Hispanic clients: -00.14 (0.04) Hispanic case managers: White clients: -00.19 (0.02) / Hispanic clients: -00.09 (0.03) Comparison: - Case manager race: p=0.88 - Client race: p=0.04 - Interaction of client and case manager race: p=0.08 Aggregate by race: White clients: -0.17 (0.01) / Hispanic clients: -0.13 (0.02), p=0.04 *Depression scores* *Mean (SE) change scores for at 12-month follow-up:* White case managers: White clients: -1.37 (0.06) / Hispanic clients: -1.24 (0.21) Black case managers: White clients: -1.44 (0.11)/ Hispanic clients: -1.04 (0.32) Hispanic case managers: White clients: -1.67 (0.18) / Hispanic clients: -0.84 (0.29) Comparison: - Case manager race: p=0.88 - Client race: p=0.01 - Interaction of client and case manager race: p=0.18 Aggregate by race: White clients: -1.49 (0.07) / Hispanic clients: -1.04 (0.16), p=0.01 *Quality of life Mean (SE) change scores for at 12-month follow-up:* White case managers: White clients: 1.12 (0.04) / Hispanic clients: 1.09 (0.13) Black case managers: White clients: 1.13 (0.08) / Hispanic clients: 1.17 (0.25)

			Hispanic case managers: White clients: 1.21 (0.14) / Hispanic clients: 1.17 (0.23) Comparison: - Case manager race: p=0.87 - Client race: p=0.86 - Interaction of client and case manager race: p=0.98 *Social support Mean (SE) change scores for at 12-month follow-up:* White case managers: White clients: 0.47 (0.05) / Hispanic clients: 0.20 (0.20) Black case managers: White clients: 0.50 (0.10) / Hispanic clients: 0.20 (0.32) Hispanic case managers: White clients: 0.30 (0.17) / Hispanic clients: -0.63 (0.29) Comparison: - Case manager race: p=0.03 - Client race: p=0.001 - Interaction of client and case manager race: p=0.23 Aggregate by race: White clients: -0.42 (0.07) / Hispanic clients: -0.07 (0.16), p=0.004
Robidoux et al. 2023 (USA) **Aim:** To improve postpartum screening and referral rates in Latinx and immigrant mothers specifically through utilisation of community health workers https://doi.org/10.1007/s10903-023-01503-3	**Study design:** Repeat cross-sectional pre-post non-experimental (no control group) Quality improvement project **Type of intervention:** Community health workers to assist with postpartum depression screening and referral to behaviour services Edinburgh Postnatal Depression Scale (EPDS) was presented to participants in	**Participants** Latinx and immigrant mothers (n=1846) Pre-implementation (n=1,014) Post-implementation (n=832) **Participant details** *Ethnicity:* Latinx (100%) *Gender:* Female (100%) *Age:* 28.2±5.9[9] Less than 19 (7%) / 20-29 (50%) / 30-39 (42%) / 40 or higher (2%)	**Primary findings:** **Screening rate of eligible postpartum mothers** Pre-implementation (45%)[10] / Post-implementation (66%) Overall percent increase in screening: 21%, p< 0.001 **Referral rate for patients that screened positive** Pre-implementation (9%) / Post-implementation (22%) Overall increase in referrals of 13%, p=0.18 *(calculated by reviewers)*

	English or Spanish by a community health worker in addition to the usual well-child visit. Depending on patient preference, the screening was administered as an interview, or the patient completed the screening individually once the screening tool was explained. The community health worker then briefly discussed the patient's score and used an algorithm to identify possible treatment options. When a patient screened positive, indicated by a score greater than 10 or a positive answer on question 10 (the thought of harming myself has occurred to me), the community health worker would explain that a referral to a behavioral health specialist may be recommended. If community health workers were unavailable to meet with the patient, the EPDS screening tool was still included with the routine well-child visit paperwork for the patient to complete. Barriers to patient keeping the scheduled referral appointment to behavioral specialist were addressed and additional community resources were offered, such as support groups or online resources **Data collection methods:** Chart review Pre- and post-implementation data were collected by reviewing current procedural terminology billing codes to identify patients being seen for well child visits The history and physical, progress notes and problem list of each patient were also reviewed **Dates of data collection:**	*MH condition/s:* Postpartum depression pre-implementation (screened positive 8% n=35/452); referred 9% n=3/35) Postpartum depression post-implementation (screened positive 9% n=50/552; referred 22% n=11/50) **Setting:** Two South Carolina paediatric patient-centred medical homes that primarily provide care to low-income Latinx populations Screening for postpartum depression was conducted during a well-child visit (Newborn, 1 month, 2 months, 4 months, or 6 months) **Quality rating:** LOW	

	Pre-implementation for 6 months (March 2019-August 2019) Post-implementation for 6 months (September 2019-February 2020) **Outcome/s of interest:** Screening rates Referral rates **Outcome measures:** Current procedural terminology codes indicating emotional/behavioural assessments and/or mention of postpartum depression or Edinburgh Postnatal Depression Scale screening		
Sanchez et al. 2022 (USA) **Aim:** To improve the cultural responsiveness of services and to examine the clinical utility, and preliminary effects of the CFI on treatment engagement and response in children's mental health care https://dx.doi.org/10.1080/15374416.2021.1981340	**Study design:** RCT Pilot **Type of intervention:** Assessment as usual plus the cultural formulation interview (AAU and CFI) The CFI is a (16-item) semi-structured interview designed for providers to assess a patient's cultural identity and how it might affect key aspects of their understanding of mental health difficulties and clinical care The CFI assesses the patient's individual symptom experience, their perceptions of mental health, and their perceptions and experiences of treatment via four domains: (1) cultural definition of the problem (2) cultural perceptions of cause, context, and support, (3) cultural factors affecting self-coping and past help seeking, and	**Participants** Primary caregivers of children aged 2-7 years with behaviour problems (clinically elevated symptoms) (n=89) **Sample size:** IG (n=39) / CG (n=50) **Participant details IG – child** *Ethnicity*: Hispanic/Latinx (53.8%), Haitian (2.6%), not Hispanic or Haitian (43.6%) *Race:* American Indian (2.6%), Asian (2.6%), Black or African American (28.2%), White (56.4%), Bi/Multiracial (10.3%), Other (0%) *Gender:* Female (28.2%) *Age:* 5.2±1.6, *MH condition/s:* behaviour problems (clinically elevated symptoms) **Participant details IG –caregiver** *Ethnicity:* Hispanic/Latinx (51.3%) Haitian (5.1%); not Hispanic or Haitian (43.6%)	**Primary findings:** **Initial treatment attendance** *Main effect* CFI+AAU (82.1%), Probability 0.95±0.04 AAU (72%), Probability 0.91±0.04 *b*=0.54, p=0.40, aOR=1.7 *Effect of language provision:* English CFI+AAU Probability 0.95 / AAU Probability 0.99; *b*=−1.32, p=0.17 *Effect of language provision* Spanish CFI+AAU Probability 0.97 AAU Probability 0.57 *b*=3.27, p=0.01 **Completed first treatment module** *Main effect* CFI+AAU (64.1%) , Probability 0.75±0.07 AAU (52.0%), Probability 0.45±0.07 *b*=1.28, p=0.03, aOR=3.61 *Effect of language provision:* English CFI+AAU Probability 0.78

	(4) cultural factors affecting current help seeking **Control:** Assessment as usual (AAU) entailed the standard intake assessment procedures used in the county-funded behavioural parenting program. This included a parent interview regarding the child's developmental milestones, educational history, medical history, disruptive behavior symptoms, previous treatment experiences, and current parenting strategies. A series of observational parent–child interaction tasks followed **Data collection methods** Provider logs **Dates of data collection:** August 2017 to October 2018 continued through March 2019 **Outcome/s of interest:** Treatment engagement Treatment response **Outcome measures:** Initial treatment session attendance Weekly session attendance rates Completion of first treatment module Working Alliance Inventory-Short Form Revised Families were classified as Treatment Responders in accordance with formal PCIT graduation criteria that is: (a) caregivers demonstrated skill acquisition, a coded against specific criteria in both phases of treatment; and	*Race:* American Indian (2.6%), Asian (2.6%), Black or African American (30.8%), White (56.4%), Bi/Multiracial (7.7%), Other (0%) *Age:* 35.1±7.4 **Participant details CG – child** *Ethnicity:* Hispanic/Latinx (70.0%); Haitian (6.0%); not Hispanic or Haitian (24.0%) *Race:* American Indian (0%), Asian (0%), Black or African American (16.0%), White (68.0%), Bi/Multiracial (8.0%), Other (8.0%) *Gender*: Female (34.0%) *Age:* Child 5.5±1.5 MH condition/s: behaviour problems (clinically elevated symptoms) **Participant details CG – caregiver** *Ethnicity:* Hispanic/Latinx (72.0%) Haitian (4.0%); not Hispanic or Haitian (24.0%) *Race:* American Indian (0%), Asian (0%), Black or African American (18.0%), White (68.0%), Bi/Multiracial (4.0%), Other (10.0%) *Age*: 33.8±7.0 **Setting:** Three community clinics that were embedded within neighbourhood centres regularly accessed by the community **Quality rating:** MEDIUM	AAU Probability 0.68 *b*=0.51, p=0.44 *Effect of language provision:* Spanish CFI+AAU Probability 0.85 AAU Probability 0.12 *b*=3.76, p =0.008 **Weekly session attendance rate** *Main effect* CFI+AAU (65.34%), Mean 0.65±0.38 AAU (57.0%), Mean 0.57±0.40 *b*=0.076, p=0.38, d=3.61 *Effect of language provision:* Spanish CFI+AAU Mean 0.73 AAU Mean 0.40 *b*=0.45, p=0.003 **Treatment response** (i.e., graduated from treatment, mastered parenting skills from both phases of treatment, and rated their child's posttreatment behaviour problem on the ECBI as within normal limits) *Main effect* CFI+AAU (46.2%), Probability 0.53±0.08 AAU (40.0%), Probability 0.35±0.07 *b*=0.76, p=0.171, aOR=2.13 *Effect of language provision:* English CFI+AAU vs AAU *b*=0.035, p=0.954 *Effect of language provision:* Spanish CFI+AAU vs AAU *b*=2.79, p=0.01 **Additional findings:** **Therapeutic Alliance** *Main effect* CFI+AAU Mean 54.03±8.90 AAU Mean 57.06±7.21

	(b) child behaviour problems dropped into the subclinical range – i.e., Eyberg Child Behavior Inventory (ECBI) falls below 114		*b*=0.18, p=0.93, d=0 *Effect of language provision (overall)* CFI+AAU vs AAU *b*=0.57, p=0.90
Seabrooke and Milne 2009 (UK) **Aim:** To raise awareness of 'memory problems' in older Asians and facilitate access to dementia screening and diagnosis To encourage referrals from primary care including the community mental health team for older people, social services and specialist voluntary agencies https://doi.org/10.1108/14717794200900029	**Study design:** Repeat cross-sectional pre-post non experimental (no control group) **Type of intervention:** 1. Letter and information leaflet sent to patients inviting them to make an appointment to discuss memory concerns with GP or nurse practitioner 2. Leaflets left in surgery waiting area 3. Training for nurse practitioner from local old age psychologist on dementia symptoms, management and treatment, dementia screening and the role and function of specialist/support services **Data collection methods:** Audit of number of patients seen for assessment in practice and number of patients referred to secondary care following intervention **Dates of data collection:** Sept 2006 – Oct 2007 Data collected in the 3 months prior to implementation of the project in 05/06 **Outcome/s of interest:** Awareness of memory problems in older Asians	**Participants** Older Asians (n=167) No participant details provided **Setting:** GP surgery (one selected for a pilot out of a potential; 39) **Quality rating:** LOW	**Primary findings:** Five Asian patients were seen within the 6-week period following letters going out - this compares with no Asian patients presenting with memory problems in the 3 months prior to the project implementation Three of these were referred, one for close monitoring with GP and one referral required. 37% increase in number of patients referred to specialist Jasmine Centre (clinic for memory assessments) during the 12-month period of the project, but 'only a small proportion were Black and Minority Ethnic patients' n=not stated) and these were referrals from all local GP surgeries not just the intervention surgery Number of Black and Minority Ethnic referrals to voluntary agency (Alzheimer's and Dementia Support Service) increased from 4 (Nov 05-Oct 06) to 9 (Nov 06-Oct 07) (N.B. this is the number of total referrals not just those from the intervention practice) **Additional findings:** Anecdotal feedback suggests an increase in needs assessments for users with dementia and their carers with additional requests for respite care. Anecdotal evidence that the nurse practitioner's knowledge about dementia had increased Anecdotal evidence of increased awareness about dementia and early diagnosis amongst service providers more widely in North West Kent

	Referral rates to community mental health team and other secondary support services (including social services) **Outcome measures:** - Number of Asian patients presenting to GP surgery with memory problems (in a defined six week period following letters going out) - Number of referrals to secondary care (Jasmine Clinic) and voluntary agency (Alzheimer's and Dementia Support Service) - Overall numbers including all ethnicities and all referrals not just those from the intervention GP surgery		
Teng and Friedman 2009 (USA) **Aim:** To evaluate the effectiveness of a community intervention in increasing awareness of mental health issues and available resources among elderly Chinese Americans https://dx.doi.org/10.1016/j.pec.2008.11.008	**Study design:** Longitudinal pre-post non-experimental (no control group) **Type of intervention:** Psycho-educational intervention: One hour educational presentation delivered in English and Mandarin The lecture began with an introduction to mental health, followed by an outline of types of mental health professionals, differences in training, and types of services offered The second part described psychiatric disorders most relevant to an elderly Chinese population (e.g., mood and anxiety disorders, somatoform disorders, etc.) **Data collection methods:**	**Participants** Elderly Chinese Americans (n=27) **Sample size:** n=27 of approximately 40 lecture attendees **Participant details** *Ethnicity:* Chinese American (100%) 18 provided demographic data: *Gender: Female (66.7%)* *Age:* 74±9.41 **Setting:** A Protestant church located in a middle-class region of Houston, Texas **Quality rating:** LOW	**Primary findings:** **Help seeking preference for psychiatric symptoms (%)** Family friend Pre-test 40.56%, post-test 30.56%, p=0.009 Primary care doctor Pre-test 22.5%, post-test 22.81% p=0.375 MH professional Pre-test 20.44%, post-test 32.94% p=0.005 Spiritual healer Pre-test 5.81%, post-test 2.13% p=0.09 Not seek help Pre-test 11%, post- test 10.94%, p=0.353 **Additional findings:** **Help seeking preference for physical symptoms (%)** Family friend Pre-test 29%, post-test 18.46%, p=0.003 Primary care doctor Pre-test 57.46%, post-test 66.38%, p=0.02

	Questionnaire before and after the intervention **Dates of data collection:** Not stated **Outcome/s of interest:** Help seeking preferences for mental health problems **Outcome measures:** -Help-Seeking Preferences Questionnaire pre and post intervention -Brief acculturation scale measuring acculturation level of participants		MH professional Pre-test 4.54%, post-test 6.85%, p=0.14 Spiritual healer Pre-test 0%, post-test 0.38% p=0.158 Not seek help Pre-test 9.08%, post-test 6.31%, p=0.153
Yeung et al 2004 (USA) **Aim:** To investigate whether integrating psychiatry and primary healthcare improves referral to and treatment acceptability of mental health services among Chinese Americans https://dx.doi.org/10.1016/j.genhosppsych.2004.03.008	**Study design:** Repeat cross-sectional pre-post non-experimental (no control group) **Type of intervention:** Integrating psychiatry and primary healthcare: • Training primary care physicians on established treatment guidelines (two – 1-hour seminars) • Training the primary care physicians and primary care nurse on cultural sensitivity (1 hour seminar) • Primary care nurse as the “bridge” or care manager. • Liaison psychiatrist provided on-site services **Data collection methods:** Review of referral records	**Participants** Chinese American adults (n=106) **Sample size:** 64 referred in IG, 38 referred in CG **Participant details IG** *Ethnicity:* Chinese Americans (100%) *Gender:* Female (75%) *Age:* 54±18 *MH condition/s:* Major depressive disorder (36%), Generalized anxiety disorder (11%), Adjustment disorder (9.4%), Dementia (3%), Schizophrenia (3%), Somatoform disorder (3%), Acute stress disorder (1.5%), Attention deficit/hyperactivity disorder (1.5%), Gender identity disorder (1.5%), Personality disorder (1.5%) **Participant details CG** *Ethnicity:* Chinese Americans (100%) *Gender:* Female (67%)	**Primary findings:** **Primary care patients referred to mental health service (%)** IG: 1.05%; HCG: 0.66%; p<0.05 **Show-up rate for initial evaluation (%)** IG: 88%; HCG: 53%; p<0.001

	Historical data was collected on patients referred by the Adult Medicine Department in the 12 months prior to the project **Dates of data collection:** Records assessed for the period of the project (Jan–Dec 2000) and the year prior to it (Jan–Dec 1999) **Outcome/s of interest:** Referrals Attendance **Outcome measures:** Primary care patients referred to mental health service (%) Show-up rate for initial evaluation (%)	*Age:* 53±15 *MH condition/s: Not reported* **Setting:** An urban community health centre serving low-income Asian immigrants who face financial, linguistic, and cultural barriers to health care Its Behavioral Health Department is staffed with bilingual and bicultural providers including psychiatrists, psychologists, social workers, and mental health counsellors **Quality rating:** MEDIUM	

Key: AAU: Assessment as Usual; ACT: Assertive community treatment; aOR: adjusted odds ratio; aHR: adjusted hazard ration; aIRR: adjusted incident rate ratio; CAMHS: Child and adolescent mental health services; CRHT: Crisis Resolution Home Treatment; CA: Clinical Assessment; CFI: Cultural Formulation Interview; CG: Control group; DNA: Did not attend; EPIC: Enhancing Pathways Into Care; ERC: Enhanced referral care; GP: General practitioner; HCG: Historical comparison group; IAPT: Improving Access to Psychological Therapy; IC: Integrated care; IG: Intervention group; IRR: Incident rate ratio; MH: Mental health; MH/SA: Mental health/substance abuse; N/A: Not applicable; N/R: Not reported ; OR: odds ratio; RCT: Randomised controlled trial SD: Standard deviation SE: Standard error

[1]Adjusted for baseline levels of distress as measured by the General Health Questionnaire
[2]Adjusted for physician type and specialty department with repeated effects for repeat patient visits, patients were cross-classified by 228 physicians, and physicians were nested within 2 specialty departments.
[3]Participants were recruited as “healthy volunteers” from the general population and not screened for mental health or asked about currently accessing mental health support
[4]The results of the post-hoc analyses by race are not reported.
[5]Ethnicity data was not available for all 107 participants n=63/98)
[6]Ethnicity data was not available for all 62 participants n=35/48)
[7]Ethnicity data was not available for all 163 participants n=93/151)
[8]data by client race regardless of case manager race
[9]Only available for post-implementation sample for those who were screened for postpartum depression (n=552)
[10]The pre-implementation denominator is reflective of the same mothers potentially being screened more than once, as they could have been seen for more than one eligible well child visit during the 6 month data collection period.

6.4 Quality appraisal

Table 7: Summary results of the QCC critical appraisal

Study	QCC questions										Overall designation
	1	2	3	4	5	6	7	8	9	10	
Alvidrez et al. 2005	Y	Y	N	Y	N	Y	Y	N	Y	Y	Ø
Arean et al. 2008	Y	Y	Y	Y	N	Y	Y	Y	N	Y	+
Evans et al. 2014	Y	N	N	Y	N	Y	N	N	Y	Y	Ø
Gorman et al 2021	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	+
Hackett et al. 2009	N	Y	UC	NA	UC	UC	Y	N	N	Y	-
Martin et al. 2022	Y	N	Y	Y	UC	Y	Y	N	Y	Y	Ø
Michelson and Day 2014	Y	Y	N	Y	N	Y	N	N	Y	Y	Ø
Mukadam et al. 2018	Y	Y	N	Y	N	UC	Y	Y	Y	Y	Ø
Ortega & Rosenheck 2002	Y	UC	N	N	N	Y	Y	Y	Y	Y	Ø
Robidoux et al. 2023	Y	N	UC	NA	UC	N	Y	N	N	Y	-
Sanchez et al. 2022	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Ø
Seabrooke & Milne 2009	N	N	UC	NA	N	N	N	N	N	UC	-
Teng and Friedman 2009	Y	N	NA	Y	N	Y	N	Y	N	UC	-
Yeung et al 2004	Y	Y	UC	NA	N	Y	Y	Y	Y	Y	Ø

Y=Yes, N=No, UC=Unclear, NA=Not applicable, +=High, Ø = Medium, - = Low

QCC Questions

1. Was the research question clearly stated?
2. Was the selection of study subjects/patients free from bias?
3. Were study groups comparable?
4. Was method of handling withdrawals described?
5. Was blinding used to prevent introduction of bias?
6. Were intervention/therapeutic regimens/exposure factor or procedure and any comparison(s) described in detail? Were intervening factors described?
7. Were outcomes clearly defined and the measurements valid and reliable?
8. Was the statistical analysis appropriate for the study design and type of outcome indicators?
9. Are conclusions supported by results with biases and limitations taken into consideration?
10. Is bias due to study's funding or sponsorship unlikely?

QCC Overall designation criteria

- Low (-) If most (six or more) of the answers to the above validity questions are "No," the report should be designated with low (-)
- Medium(Ø) If the answers to any of the first four validity questions (1-4) is "No", but other criteria indicate strengths, the report should be designated medium (Ø
- High (+) If most of the answers to the above validity questions (six or more) are "Yes" (must include 1, 2, 3, and 4), the report should be designated high (+)
- When a validity criteria question is N/A
    - If any of the ten validity questions are N/A, the report requires a majority of "Yes" answers (including 1, 2, 3,4, as applicable) for a (+), or a majority or "No" answers for a (-) rating

Table 8: Results of the assessment of the strength of evidence elements for studies included in the rapid review

Strength of Evidence Elements of interventions focusing on change at the individual level					
Study author	**Quality***	**Consistency**	**Quantity**	**Clinical Impact**	**Generalisability**
Alvidrez et al. 2005	Quasi-experimental study QCC rating – Medium	- ethnicity of psycho educator on initial or ongoing appointment attendance - Initial appointment attendance ↑ ongoing appointment attendance	Sample size n=69	No effect size data (Mean±SD, p values)	USA Older adults African American participants Psycho-educational intervention
Martin et al. 2022	RCT QCC rating – Medium	- depression stigma (video 1 for Black participants) ↓ depression stigma (video 2 for Black participants; (video 1 and 2 for non-Black participants) ↑ help seeking intention doctor/GP (video 1 and 2 for both Black and non-Black participants) ↑ help seeking intention MH professionals (Video 1 for both Black and non-Black participants) - help seeking intention MH professionals (Video 2 for both Black and non-Black participants) - Black relative to non-Black on all outcomes	Sample size n=1093	No effect size data (Mean±SD, p values)	USA Adolescents aged 14-18 years Black participants Psycho-educational intervention
Mukadam et al. 2018	RCT QCC rating – Medium	- help seeking intentions	Sample size n=78	No effect size data (Mean±SD, p values)	UK Adults >50 years

					South Asian participants Psycho-educational intervention
Teng and Friedman 2009	Non-experimental study QCC rating – Low	↑ help seeking intention MH professional - help seeking intention GP	Sample size: n=27	No effect size data (Mean±SD, p values)	USA Older adults Chinese American participants Psycho-educational intervention
Strength of Evidence Elements of interventions focusing on change at the organisational level					
Arean et al. 2008	RCT QCC rating - High	↓ number days until first visit (Blacks) - number days until first visit (Whites, Latino, Asian) - number days until first visit (Black, Latino, Asian relative to White) ↑ initial appointment attendance (Latinos) ↓ initial appointment attendance (Asians) - initial appointment attendance (Whites, Blacks) - initial appointment attendance (Blacks, Latino relative to White) ↓ initial appointment attendance (Asians relative to White) ↑ ongoing appointment attendance (Whites, Blacks, Latino) ↓ ongoing appointment attendance (Asians) - depression scores (Black, Latino, Asian, White) - anxiety scores (Black, Latino, Asian, White)	Sample size n=2022	Effect sizes calculated	USA Older adults (>65 years) Ethnic minority groups Integrated MH care in a primary care

Evans et al. 2014	Quasi-experimental study QCC rating - Medium	↑ referrals		No effect size data Descriptive statistics	UK Adults Black and Minority Ethnic Link worker
Gorman et al 2021	Quasi-experimental study QCC rating - High	↑ screening ↑ screening (Black/African American and Asian participants to White))	Sample size 45,157 visits by 21,377 unique patients	Effect sizes calculated	USA Adults Ethnic minority groups Routine depression screening by medical assistants
Strength of Evidence Elements of interventions focusing on change on change at both interpersonal and organisational levels					
Ortega and Rosenbeck 2002	Non-experimental study QCC rating -Medium	- service use - clinical outcomes [a] ↓ Hispanic clients with Hispanic case manager – psychosis symptoms	Sample size n=2575 White n=242 Hispanic	No effect size data (Mean±SE, p values)	USA Adults (Homeless clients) Hispanic Client-case manager ethnic matching
Yeung et al. 2004	Non-experimental study QCC rating - Medium	↑ referral ↑ initial appointment attendance	Sample size n=106	No effect size data Proportions, p values	USA Adults Chinese Americans Integrating psychiatry and primary healthcare
Strength of Evidence Elements of interventions focusing on change on change at both community and organisational levels					
Hackett et al. 2009	Non-experimental study QCC rating - Low	↑ referrals ↑ service use ↓ length of stay	Sample size 3.9% of Inpatient admissions (2005-2006) 2.9% of Crisis	No effect size data Descriptive statistics	UK Adults Pakistani participants Community engagement Link worker

			Resolution total episodes (2005-2006) 3.6% of Crisis resolution home treatment (2005-2006)		
Robidoux et al. 2023	Non-experimental study QCC rating -Low	↑ screening - referral	Sample size n=1846	No effect size data Proportions, p values	USA Mothers Lantinx Community health workers assisting with postpartum depression screening
Strength of Evidence Elements of interventions focusing on change on change at both individual and organisational levels					
Seabrooke and Milne 2009	Non-experimental study QCC rating – Low	↑ initial appointment attendance ↑ referral	Sample size	No effect size data Descriptive statistics	UK Older Adults Asians Educational leaflets about dementia HCP education
Strength of Evidence Elements of interventions focusing on change on change at both individual and organisational levels					
Michelson and Day 2014	Quasi-experimental study QCC rating - Medium	- initial appointment attendance - ongoing appointment attendance ↓ Initial and ongoing appointment DNA rates	Sample size n=332	No effect size data Proportions, p values	UK Primary parental caregivers of all children and adolescents Black and Minority Ethnic Pre-appointment engagement intervention

		- initial appointment DNA rates (Black and Minority Ethnic compared to White)			
Sanchez et al. 2022	RCT QCC rating - Medium	- ongoing treatment attendance (overall results) - initial treatment attendance (overall results) ↑ treatment completion (overall results) - treatment response (overall results) ↑ ongoing treatment attendance (In Spanish) ↑ initial treatment attendance (In Spanish) ↑ treatment completion (In Spanish) ↑ treatment response) (In Spanish)	Sample size n=89	Effect sizes calculated	USA Primary caregivers of children aged 2-7 years Ethnic minority groups (Hispanic/Latinx, Haitian, or Not Hispanic or Haitian) Cultural formulation interview to assess perceptions of mental health and experiences of treatment Behavioural problems

[a] The interaction of client and case manager race was only significant for psychosis symptoms where Hispanic clients of Hispanic case managers had less reduction in psychotic symptoms than other ethnic and racial pairings (p=0.001).

Key: Green – Intervention improved outcomes; Amber – No difference between intervention and comparison; Red – Outcomes favour the comparison, or ; No colour – only descriptive statistics, no statistical significance can be identified

* The results of the QCC assessment for each study is presented in Table 7

7. ADDITIONAL INFORMATION

7.1 Protocol

The protocol for this rapid review is available on Open Science Framework https://osf.io/xpfje/

7.2 Conflicts of interest

The authors declare they have no conflicts of interest to report.

7.3 Acknowledgements

The authors would like to thank Beverly Morgan, Kim Swain, Hannah Bayfield, Thomas Hoare, Holly Howe-Davies, Olivia Gallen and Mel (Melanie) McAulay for their contributions during stakeholder meetings in guiding the focus of the review, interpretation of findings and commenting on draft versions of the report.

8. APPENDIX

Appendix 1: Search strategies

Database: APA PsycINFO

#	Query	Results from 15 Dec 2023
1	exp "Racial and Ethnic Groups"/	160,058
2	exp Minority Groups/	21,499
3	(BAME or BME).tw.	420
4	((racial or ethnic*) adj3 (population* or group* or communit* or neighbo?rhood* or minorit* or area* or demograph*)).tw.	48,470
5	((Asian* or Bangladeshi* or Chinese or Pakistani* or Indian*) adj2 (people or person* or wom#n or m#n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or neighbo?rhood* or demograph* or Brit* or Welsh or English or Scottish or Irish or American*)).tw.	45,696
6	(black adj2 (people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or young* or old* or elder* population* or communit* or group* or area* or demograph* or neighbo#rhood* or Brit* or Welsh or English or Scottish or Irish or Caribbean or African)).tw.	27,417
7	((Afro* or African* or Latin*) adj1 american*).tw.	59,450
8	(Afrocaribbean* or Afro caribbean*).tw.	509
9	(hispanic* or mexican*).tw.	47,930
10	(Arab adj2 (people or person* or wom#n or m#n or male* or female* or mother* or father* or individual* or member* or adult* or child* or population* or communit* or group* or area* or neighbo?rhood* or demograph* or Brit* or Welsh or English or Scottish or Irish)).tw.	1,575
11	(roma or romas or romany or romani or romanis or romanies or gypsy or gypsies or gipsies or gipsy or travel*).tw.	24,164
12	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11	288,417
13	(mental health care or mental healthcare or mental health service* or mental health therap* or mental health treatment* or "mental health intervention*" or mental health support or psycholog* care or psycholog* service* or psycholog* support or psycholog* therap* or psycholog* treatment* or psycholog* intervention* or psychiatric care or psychiatric support or psychiatric service* or psychiatric therap* or psychiatric treatment* or psychiatric intervention*).tw.	104,102
14	exp Mental Health Services/	58,679
15	exp dementia/	93,192
16	exp Alzheimer's Disease/	56,370
17	(dementia or alzheimer*).tw.	121,246
18	exp Mental Health/	94,162
19	((mental or psychiatr* or psycholog*) adj2 (health or ill* or well* or disease* or disorder* or condition* or problem* or difficult*)).tw.	449,459
20	(depression or anxiety).tw.	449,304
21	exp Anxiety/	92,635
22	(schizo* or "mood disorder*" or "personality disorder*" or psychotic* or psychosis or psychoses or eating disorder* or anorexi* or bulimi* or binge-eating or bingeing or suicid* or self-harm* or self-mutil*).tw.	352,801
23	(bipolar or mania).tw.	51,749
24	exp Mental Disorders/	1,089,606
25	13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24	1,589,765
26	(access* or utilis* or utiliz* or entry or consultation* or contact* or uptake* or availab* or service* or pathway* or paths or refer* or engag* or attendance or participat*).ti.	211,356
27	exp Health Care Access/ or exp Health Care Utilization/	27,200
28	26 or 27	226,151
29	(intervention* or innovation* or strateg* or program* or improv* or increas* or enhanc* or optimiz* or optimis* or support* or trial* or initiative*).ti.	472,783
30	12 and 25 and 28 and 29	891
31	limit 30 to english language	862

Database: CINAHL

#	Query	Results from 15 Dec 2023
S30	S12 AND S23 AND S27 AND S28	1,056
S29	S12 AND S23 AND S27 AND S28	1,056
S28	(TI (intervention* or innovation* or strateg* or program* or improv* or increase* or enhance* or optimiz* or optimis* or support* or trial* or initiative*))	833,866
S27	S24 OR S25 OR S26	682,371
S26	(MH "Health Care Delivery+")	410,275
S25	(MM "Health Services Accessibility+")	50,343
S24	(TI (access* or utilis* or utiliz* or entry or consultation* or contact* or uptake* or availab* or service* or pathway* or paths or refer* or engag* or attendance or participat*))	330,633
S23	S13 OR S14 OR S15 OR S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22	958,479
S22	(MH "Mental Disorders+")	664,272
S21	(TI (bipolar or mania)) OR (AB (bipolar or mania))	19,412
S20	(TI (schizo* or "mood disorder*" or "personality disorder*" or psychotic* or psychosis or psychoses or "eating disorder*" or anorexi* or bulimi* or binge-eating or bingeing or suicid* or self-harm* or self-mutil*)) OR (AB (schizo* or "mood disorder*" or "personality disorder*" or psychotic* or psychosis or psychoses or "eating disorder*" or anorexi* or bulimi* or binge-eating or bingeing or suicid* or self-harm* or self-mutil*))	125,073
S19	(TI (depression or anxiety)) OR (AB (depression or anxiety))	213,862
S18	(TI ((mental or psychiatr* or psycholog*) N2 (health or ill* or well* or disease* or disorder* or condition* or problem* or difficult*))) OR (AB ((mental or psychiatr* or psycholog*) N2 (health or ill* or well* or disease* or disorder* or condition* or problem* or difficult*)))	223,523
S17	(TI (dementia or alzheimer*)) OR (AB (dementia or alzheimer*))	94,749
S16	(MM "Alzheimer's Disease")	28,995
S15	(MH "Dementia+")	84,931
S14	(TI ("mental health care" or "mental healthcare" or "mental health service*" or "mental health therap*" or "mental health treatment*" or "mental health intervention*" or "mental health support" or "psycholog* care" or "psycholog* service*" or "psycholog* support" or "psycholog* therap*" or "psycholog* treatment*" or "psycholog* intervention*" or "psychiatric care" or "psychiatric support" or "psychiatric service*" or "psychiatric therap*" or "psychiatric treatment*" or "psychiatric intervention*")) OR ((TI ("mental health care" or "mental healthcare" or "mental health service*" or "mental health therap*" or "mental health treatment*" or "mental health intervention*" or "mental health support" or "psycholog* care" or "psycholog* service*" or "psycholog* support" or "psycholog* therap*" or "psycholog* treatment*" or "psycholog* intervention*" or "psychiatric care" or "psychiatric support" or "psychiatric service*" or "psychiatric therap*" or "psychiatric treatment*" or "psychiatric intervention*"))	15,713
S13	(MM "Mental Health Services+")	57,359
S12	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11	223,018
S11	(TI (roma or romas or romany or romani or romanis or romanies or gypsy or gypsies or gipsies or gipsy or travel*)) OR (AB (roma or romas or romany or romani or romanis or romanies or gypsy or gypsies or gipsies or gipsy or travel*))	26,720
S10	(TI (Arab N2 ((people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or demograph* or neighbo#rhood* or Brit* or Welsh or English or Scottish or Irish))) OR (AB (Arab N2 ((people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or demograph* or neighbo#rhood* or Brit* or Welsh or English or Scottish or Irish)))	1,375
S9	(TI (hispanic* or mexican*)) OR (AB (hispanic* or mexican*))	40,974
S8	(TI (Afrocaribbean* or "Afro caribbean*")) OR (AB (Afrocaribbean* or "Afro caribbean*"))	473
S7	(TI ((Afro* or African* or Latin*) N1 american*)) OR (AB ((Afro* or African* or Latin*) N1 american*))	39,540
S6	(TI (black N2 (people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or demograph* or neighbo#rhood* or Brit* or Welsh or English or Scottish or Irish or Caribbean or African))) OR (AB (black N2 (people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or demograph* or neighbo#rhood* or Brit* or Welsh or English or Scottish or Irish or Caribbean or African)))	21,711

S5	(TI ((Asian* or Bangladeshi* or Chinese or Pakistani* or Indian*) N2 (people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or neighbo#rhood* or demograph* or Brit* or Welsh or English or Scottish or Irish or American*))) OR (AB ((Asian* or Bangladeshi* or Chinese or Pakistani* or Indian*) N2 (people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or neighbo#rhood* or demograph* or Brit* or Welsh or English or Scottish or Irish or American*)))	48,132
S4	(TI ((racial or ethnic*) N3 (population* or group* or communit* or neighbo#rhood* or minorit* or area* or demograph*))) OR (AB ((racial or ethnic*) N3 (population* or group* or communit* or neighbo#rhood* or minorit* or area* or demograph*)))	33,788
S3	TI (BAME or BME) OR AB (BAME or BME)	1,043
S2	(MM "Minority Groups")	7,684
S1	(MM "Ethnic Groups+")	86,534

Database: Ovid MEDLINE(R) ALL

#	Query	Results from 15 Dec 2023
1	exp "Racial and Ethnic Groups"/	0
2	exp Minority Groups/	18,360
3	(BAME or BME).tw.	3,704
4	((racial or ethnic*) adj3 (population* or group* or communit* or neighbo?rhood* or minorit* or area* or demograph*)).tw.	77,931
5	((Asian* or Bangladeshi* or Chinese or Pakistani* or Indian*) adj2 (people or person* or wom#n or m#n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or neighbo?rhood* or demograph* or Brit* or Welsh or English or Scottish or Irish or American*)).tw.	140,091
6	(black adj2 (people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or young* or old* or elder* population* or communit* or group* or area* or demograph* or neighbo#rhood* or Brit* or Welsh or English or Scottish or Irish or Caribbean or African)).tw.	39,879
7	((Afro* or African* or Latin*) adj1 american*).tw.	76,162
8	(Afrocaribbean* or Afro caribbean*).tw.	1,469
9	(hispanic* or mexican*).tw.	96,895
10	(Arab adj2 (people or person* or wom#n or m#n or male* or female* or mother* or father* or individual* or member* or adult* or child* or population* or communit* or group* or area* or neighbo?rhood* or demograph* or Brit* or Welsh or English or Scottish or Irish)).tw.	2,979
11	(roma or romas or romany or romani or romanis or romanies or gypsy or gypsies or gipsies or gipsy or travel*).tw.	86,646
12	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11	468,751
13	(mental health care or mental healthcare or mental health service* or mental health therap* or mental health treatment* or "mental health intervention*" or mental health support or psycholog* care or psycholog* service* or psycholog* support or psycholog* therap* or psycholog* treatment* or psycholog* intervention* or psychiatric care or psychiatric support or psychiatric service* or psychiatric therap* or psychiatric treatment* or psychiatric intervention*).tw.	86,937
14	exp Mental Health Services/	106,399
15	exp dementia/	209,525
16	exp Alzheimer's Disease/	121,685
17	(dementia or alzheimer*).tw.	277,012
18	exp Mental Health/	64,346
19	((mental or psychiatr* or psycholog*) adj2 (health or ill* or well* or disease* or disorder* or condition* or problem* or difficult*)).tw.	402,061
20	(depression or anxiety).tw.	567,279
21	exp Anxiety/	114,579
22	(schizo* or "mood disorder*" or "personality disorder*" or psychotic* or psychosis or psychoses or eating disorder* or anorexi* or bulimi* or binge-eating or bingeing or suicid* or self-harm* or self-mutil*).tw.	395,084
23	(bipolar or mania).tw.	79,795
24	exp Mental Disorders/	1,454,276
25	13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24	2,306,097

#	Query	Results from 15 Dec 2023
26	(access* or utilis* or utiliz* or entry or consultation* or contact* or uptake* or availab* or service* or pathway* or paths or refer* or engag* or attendance or participat*).ti.	1,048,886
27	exp Health Care Access/ or exp Health Care Utilization/	173,888
28	26 or 27	1,199,003
29	(intervention* or innovation* or strateg* or program* or improv* or increas* or enhanc* or optimiz* or optimis* or support* or trial* or initiative*).ti.	2,248,117
30	12 and 25 and 28 and 29	1,068
31	limit 30 to english language	1,067

Database: Web of Science Core Collection-Editions: WOS.SCI,WOS.SSCI

#	Query	Results from 19 Dec 2023
1	TI="Racial and ethnic groups" OR AB="Racial and ethnic groups"	2,225
2	TI="minority groups" OR AB="minority groups"	7,672
3	TI=(BAME OR BME) OR AB=(BAME OR BME)	2,461
4	TI=(((racial or ethnic*) NEAR/3 (population* or group* or communit* or neighbo?rhood* or minorit* or area* or demograph*))) OR AB=(((racial or ethnic*) NEAR/3 (population* or group* or communit* or neighbo?rhood* or minorit* or area* or demograph*)))	92,856
5	TI=(((Asian* or Bangladeshi* or Chinese or Pakistani* or Indian*) Near/2 (people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or neighbo$rhood* or demograph* or Brit* or Welsh or English or Scottish or Irish or American*))) OR AB==(((Asian* or Bangladeshi* or Chinese or Pakistani* or Indian*) Near/2 (people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or neighbo$rhood* or demograph* or Brit* or Welsh or English or Scottish or Irish or American*)))	124,895
6	TI=(Afrocaribbean* or Afro caribbean*) OR AB=(Afrocaribbean* or Afro caribbean*)	1,761
7	TI=(hispanic* or mexican*)OR AB=(hispanic* or mexican*)	132,791
8	TI=((Afro* or African* or Latin*) NEAR/1 american) OR TI=((Afro* or African* or Latin*) NEAR/1 american) OR AB=((Afro* or African* or Latin*) NEAR/1 american) OR TI=((Afro* or African* or Latin*) NEAR/1 american)	105,011
9	TI=(roma or romas or romany or romani or romanis or romanies or gypsy or gypsies or gipsies or gipsy or travel*) OR AB=(roma or romas or romany or romani or romanis or romanies or gypsy or gypsies or gipsies or gipsy or travel*)	221,015
10	TI=((Black) NEAR/2 (people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or demograph* or neighbo$rhood* or Brit* or Welsh or English or Scottish or Irish or Caribbean or African)) OR AB=((Black) NEAR/2 (people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or demograph* or neighbo$rhood* or Brit* or Welsh or English or Scottish or Irish or Caribbean or African))	64,780
11	TI= ((Arab) NEAR/2 (people or person* or wom?n or m?n or male* or female* or mother* or father* or individual* or member* or adult* or child* or population* or communit* or group* or area* or neighbo$rhood* or demograph* or Brit* or Welsh or English or Scottish or Irish)) OR AB= ((Arab) NEAR/2 (people or person* or wom?n or m?n or male* or female* or mother* or father* or individual* or member* or adult* or child* or population* or communit* or group* or area* or neighbo$rhood* or demograph* or Brit* or Welsh or English or Scottish or Irish))	4,691
12	#11 OR #10 OR #9 OR #8 OR #7 OR #6 OR #5 OR #4 OR #3 OR #2 OR #1	678,601
13	((TI=("mental health care" or "mental healthcare" or "mental health service*" or "mental health therap*" or "mental health treatment*" or "mental health intervention*" or "mental health support" or "psycholog* care" or "psycholog* service*" or "psycholog* support" or "psycholog* therap*" or "psycholog* treatment*" or "psycholog* intervention*" or "psychiatric care" or "psychiatric support" or "psychiatric service*" or "psychiatric therap*" or "psychiatric treatment*" or "psychiatric intervention")) or AB=("mental health care" or "mental healthcare" or "mental health service*" or "mental health therap*" or "mental health treatment*" or "mental health intervention*"	83,212

#	Query	Results from 19 Dec 2023
	or "mental health support" or "psycholog* care" or "psycholog* service*" or "psycholog* support" or "psycholog* therap*" or "psycholog* treatment*" or "psycholog* intervention*" or "psychiatric care" or "psychiatric support" or "psychiatric service*" or "psychiatric therap*" or "psychiatric treatment*" or "psychiatric intervention"))	
14	TI=(dementia OR alzheimer) OR AB=(dementia OR alzheimer)	286,870
15	TI=((mental or psychiatr* or psycholog*) near/2 (health or ill* or well* or disease* or disorder* or condition* or problem* or difficult*)) OR AB=((mental or psychiatr* or psycholog*) near/2 (health or ill* or well* or disease* or disorder* or condition* or problem* or difficult*))	435,088
16	TI=(Anxiety OR depression) OR AB=(Anxiety OR depression)	610,498
17	TI=((schizo* or "mood disorder*" or "personality disorder*" or psychotic* or psychosis or psychoses or eating disorder* or anorexi* or bulimi* or binge-eating or bingeing or suicid* or self-harm* or self-mutil*)) OR AB=((schizo* or "mood disorder*" or "personality disorder*" or psychotic* or psychosis or psychoses or eating disorder* or anorexi* or bulimi* or binge-eating or bingeing or suicid* or self-harm* or self-mutil*))	445,901
18	TI=(bipolar OR mania) OR AB=(bipolar OR mania)	122,411
19	(TI=("Mental disorder")) OR AB=("mental disorder")	10,997
20	#13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19	1,639,747
21	Ti=((access* or utilis* or utiliz* or entry or consultation* or contact* or uptake* or availab* or service* or pathway* or paths or refer* or engag* or attendance or particpat*))	1,700,852
22	(AB="Healthcare access*") OR (AB="Health care access*") OR (TI="Healthcare access*") OR (TI="Health care access*")	6,242
23	#22 OR #21	1,704,603
24	TI=(intervention* or innovation* or strateg* or program* or improv* or increas* or enhanc* or optimiz* or optimis* or support* or trial* or initiative*)	4,276,700
25	#24 AND #23 AND #20 AND #12	424

Database: Cochrane Library

#	Query	Results from 19 Dec 2023
#1	MeSH descriptor: [Racial Groups] this term only	595
#2	MeSH descriptor: [Minority Groups] this term only	528
#3	MeSH descriptor: [Ethnic and Racial Minorities] this term only	18
#4	MeSH descriptor: [Health Disparate, Minority and Vulnerable Populations] explode all trees	7,167
#5	(BAME or BME):ti,ab	87
#6	((racial or ethnic*) Near/3 (population* or group* or communit* or neighbo?rhood* or minorit* or area* or demograph*)):ti,ab	1,828
#7	((Asian* or Bangladeshi* or Chinese or Pakistani* or Indian*) Near/2 (people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or neighbo?rhood* or demograph* or Brit* or Welsh or English or Scottish or Irish or American*)):ti,ab	11,156
#8	(black Near/2 (people or person* or wom?n or m?n or mother* or father* or male* or female* or individual* or member* or adult* or child* or population* or communit* or group* or area* or demograph* or neighbo?rhood* or Brit* or Welsh or English or Scottish or Irish or Caribbean or African)):ti,ab	2,991
#9	((Afro* or African* or Latin*) Near/1 american):ti,ab	7,562
#10	(Afrocaribbean* or Afro caribbean*):ti,ab	60
#11	(hispanic* or mexican*):ti,ab	7,454
#12	(Arab Near/2 (people or person* or wom?n or m?n or male* or female* or mother* or father* or individual* or member* or adult* or child* or population* or communit* or group* or area* or neighbo?rhood* or demograph* or Brit* or Welsh or English or Scottish or Irish)):ti,ab	76
#13	(roma or romas or romany or romani or romanis or romanies or gypsy or gypsies or gipsies or gipsy or travel*):ti,ab	5,545
#14	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13	6,661
#15	("mental health care" or "mental healthcare" or ("mental health" NEXT service*) or ("mental health" NEXT therap*) or ("mental health" NEXT treatment*) or ("mental health" NEXT	13,084

	intervention*) or ("mental health" NEXT support) or (psycholog* NEXT care) or (psycholog* NEXT service*) or (psycholog* NEXT support) or (psycholog* NEXT therap*) or (psycholog* NEXT treatment*) or (psycholog* NEXT intervention*) or "psychiatric care" or "psychiatric support" or (psychiatric NEXT service*) or (psychiatric NEXT therap*) or (psychiatric NEXT treatment*) or (psychiatric NEXT intervention*)):ti,ab	
#16	MeSH descriptor: [Mental Health Services] explode all trees	9,386
#17	MeSH descriptor: [Dementia] explode all trees	9,372
#18	MeSH descriptor: [Alzheimer Disease] explode all trees	5,414
#19	(dementia or alzheimer*):ti,ab	23,331
#20	MeSH descriptor: [Mental Health] explode all trees	3,657
#21	((mental or psychiatr* or psycholog*) Near/2 (health or ill* or well* or disease* or disorder* or condition* or problem* or difficult*)):ti,ab	50,365
#22	(depression or anxiety):ti,ab	119,048
#23	MeSH descriptor: [Anxiety] explode all trees	13,382
#24	MeSH descriptor: [Depression] explode all trees	18,827
#25	(schizo* or (mood NEXT disorder*) or (personality NEXT disorder*) or psychotic* or psychosis or psychoses or eating disorder* or anorexi* or bulimi* or "binge eating" or bingeing or suicid* or self-harm* or self-mutil*):ti,ab	41,935
#26	(bipolar or mania):ti,ab,kw	9,799
#27	MeSH descriptor: [Mental Disorders] explode all trees	100,688
#28	#15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27	253,067
#29	MeSH descriptor: [Health Services Accessibility] explode all trees	1,503
#30	(access* or utilis* or utiliz* or entry or consultation* or contact* or uptake* or availab* or service* or pathway* or paths or refer* or engag* or attendance or participat*):ti	39,642
#31	#29 or #30	40,726
#32	(intervention* or innovation* or strateg* or program* or improv* or increas* or enhanc* or optimiz* or optimis* or support* or trial* or initiative*):ti	630,789
#33	#14 AND #28 AND #32 AND #33	43
	Cochrane Reviews: 1, Cochrane Protocols: 0, Trials: 42	42

APPENDIX 2: Excluded studies

	Full citation	Exclusion reason(s)	Category
1.	Afuwape et al. 2010. The Cares of Life Project (CoLP): an exploratory randomised controlled trial of a community-based intervention for black people with common mental disorder. Journal of Affective Disorders, 127(1), 370-374.	Rapid or delayed access was compared for the same intervention for a range of mental health outcomes and costs	Wrong outcomes
2.	Agius et al. 2008. Three year outcomes in an early intervention service for psychosis in a multicultural and multiethnic population. Psychiatria Danubina, 20(4), 494-499.	No intervention - Comparison of treatment outcomes across different ethnic groups for an early intervention service for psychosis	Wrong study design
3.	Agius et al. 2010. Issues regarding the delivery of early intervention psychiatric services to the south Asian population in England. Psychiatria Danubina, 22(2), 266-269.	No intervention - Comparison of engagements across different ethnic groups for an early intervention service for psychosis	Wrong study design
4.	Alegria et al. 2014a. Effectiveness of the engagement and counseling for Latinos (ECLA) intervention in low-income Latinos. Med Care, 52(11), 989-997.	CBT and care management intervention delivered by telephone or face to face	Wrong intervention
5.	Alegria et al. 2014b. Activation, self-management, engagement, and retention in behavioral health care. JAMA Psychiatry, 71(5), 557-565.	Behavioural health care intervention looking at patient activation and self-management	Wrong intervention
6.	Alegria et al. 2008. Evaluation of a patient activation and empowerment intervention in mental health care. Med Care, 46(3), 247-256.	Behavioural health care intervention looking at patient activation and self-management	Wrong intervention
7.	Baker-Ericzen et al. 2012. A collaborative care telemedicine intervention to overcome treatment barriers for Latina women with depression during the perinatal period. Families, Systems and Health, 30(3), 224-240.	Engagement with the intervention than engagement services	Wrong outcome
8.	Barnett et al. 2016. The development and evaluation of a natural helpers' training program to increase the engagement of urban, Latina/o families in parent-child interaction therapy. Children & Youth Services Review, 65, 17-25.	Evaluation of a training programme for paid employees	No relevant outcomes
9.	Beals-Erikson et al. 2016. Youth development program participation and changes in help-seeking intentions. Journal of Child and Family Studies, 25, 1634-1645.	A six-week Sumer day –camp style youth development program that sought to prevent substance use, community violence participation and risky sexual behaviour	Wrong intervention
10.	Biegel 1983. Help seeking and receiving in urban ethnic neighborhoods: strategies for empowerment. Prevention in Human Services, 3(2), 119-143.	99% white	Wrong population
11.	Briggs et al. 2014. Increasing knowledge and mental health service use among African Americans through evidence-based practice and cultural injection vector engagement practice approaches. Best Practices in Mental	Change in knowledge of mental health disorders	Wrong outcome

	Health: An International Journal, 10(2), 1-14.		
12.	Brown 2018. Increasing access to psychological treatments for adults by improving uptake and equity: rationale and lessons from the UK. International Journal of Mental Health Systems, 12(1)	Commentary	Wrong publication type
13.	Cabassa et al. 2014. Bridges to better health and wellness: an adapted health care manager intervention for Hispanics with serious mental illness. Administration and Policy in mental Health, 45, 163-173	Receiving preventative primary care services	Wrong outcome
14.	Champion 2023. Development, pre-testing and feasibility testing of multi-component interventions, critical for mental health promotion in primary care among Mexican-American adolescents living in rural America. Children, 10(3), 465.	Descriptive study	Wrong study design
15.	Chang et al. 2018. Community health workers, access to care, and service utilization among Florida Latinos: a randomized controlled trial. American Journal of Public Health, 108(9), 1249-1251.	Diabetes service utilisation not mental health	Wrong outcome
16.	Choi et al. 2010. Effect of telehealth treatment by lay counselors vs by clinicians on depressive symptoms among older adults who are homebound: a randomized clinical trial. JAMA Network Open, 3(8), e2015648-e2015648.	General population, no ethnic minority communities	Wrong population
17.	De Lusignan et al. 2011. Detecting referral and selection bias by the anonymous linkage of practice, hospital and clinic data using Secure and Private Record Linkage (SAPREL): case study from the evaluation the Improved Access to Psychological Therapy (IAPT) service. BMC Medical Informatics & Decision Making, 11(1), 61-61.	Looking at the use of a mixed deterministic-probabilistic method of secure and private record linkage (SAPREL) - to describe selection bias in subjects chosen for in-depth evaluation	Wrong study design
18.	DeCarlo Santiago et al. 2014. Progress in improving mental health services for racial-ethnic minority groups: a ten-year perspective. Psychiatric Services, 65(2), 180-185.	Pooled retrospective data across clinical trials	Wrong study design
19.	Dowrick et al. 2016. Evaluating a complex model designed to increase access to high quality primary mental health care for under-served groups: a multi-method study. BMC Health Services Research, 16, 1-10.	No denominator provided for referral numbers and no statistical tests conducted and no disaggregated data for ethnic minority groups	Poor reporting
20.	Flaskerud, J. H. 1986. The effects of culture-compatible intervention on the utilization of mental health services by minority clients. Community Mental Health Journal, 22(2), 127-141.	No intervention - Examined the relationship between a culture-compatible approach to mental health service and utilization as measured by dropout rate and total number of outpatient visits	Wrong study design
21.	Ghali et al. 2013. Ethnic variations in pathways into early intervention services	Mostly white and not people from ethnic minority communities	Wrong population

	for psychosis. The British Journal of Psychiatry, 202(4), 277-283.		
22.	Ginossar et al. 2010. La comunidad habla: using internet community-based information interventions to increase empowerment and access to health care of low income Latino/a immigrants. Communication Education, 59(3), 328-343.	Discussion article	Wrong publication type
23.	Hart et al. 1996. Strategies for increasing participation of ethnic minorities in Alzheimer's disease diagnostic centers: A multifaceted approach in California. The Gerontologist, 36(2), 259-262.	Not research	Wrong publication type
24.	Huang et al. 2016a. The Affordable Care Act and integrated behavioral health programs in community health centers to promote utilization of mental health services among Asian Americans Translational Behavioral Medicine, 6(2), 316-316.	Erratum	Wrong publication type
25.	Huang et al. 2016b. The Affordable Care Act and integrated behavioral health programs in community health centers to promote utilization of mental health services among Asian Americans. Translational Behavioral Medicine, 6(2), 309-315.	Discussion article	Wrong publication type
26.	Jones et al. 2023. Masks off: a community-based psycho-educational group intervention with black women. The journal for Specialists in Group Work, 48930, 212-228	A community-based and culturally responsive psycho-educational group intervention to enhance wellness among Black women	Wrong intervention
27.	June 1986. Enhancing the delivery of mental health and counseling services to Black males: critical agency and provider responsibilities. Journal of Multicultural Counseling and Development, 14(1), 39-45.	Not research	Wrong publication type
28.	Koizumi et al. 2009. Distance matters in choice of mental health program: policy implications for reducing racial disparities in public mental health care. Administration and Policy in Mental Health, 36, 424-431.	All participants had accessed care – this paper looks at the likelihood of choosing one program over another	Wrong outcome
29.	Laake et al. 2021. Realising the potential of Improving Access to Psychological Therapies for older adults. British Journal of General Practice, 71(702), 8-9.	Editorial	Wrong publication type
30.	Lawton et al. 2021. Frontline yet at the back of the queue: improving access and adaptations to CBT for Black African and Caribbean communities. The Cognitive Behaviour Therapist, 14, e30, 1-19	Audit	Wrong study design
31.	Merianos et al. 2017. Effective prevention strategies for increasing health services utilization among	Narrative review	Wrong study design

	Hispanic youth. Community Mental Health Journal, 53(1), 79-91.		
32.	Miech et al. 2008. The potential to reduce mental health disparities through the comprehensive community mental health services for children and their families program. The Journal of Behavioral Health Services & Research, 35(3), 253-264	No intervention: to examine whether funded CMHI programs disproportionately provide services to children and adolescents who come from poorer families and minority race–ethnic groups	Wrong study design
33.	Miranda et al. 2003. Improving care for minorities: can quality improvement interventions improve care and outcomes for depressed minorities? Results of a randomised controlled trial. Health Services Research, 38(2), 613-630.	Cultural adaptation of treatment interventions for ethnic minority communities	Wrong intervention
34.	Moffat et al.2009. Enhancing pathways & mental healthcare for BME groups: Learning between the ideological and operational. International Review of Psychiatry, 21(5), 450-459.	Evaluation - audit outcomes pertain to implementation	Wrong outcomes
35.	Murshed et al.2023. Increasing ethnicity reporting to better understand cultural needs accessing a primary care talking therapy service. Behavioural and Cognitive Psychotherapy, 51(5), 479-484.	Evaluation - audit with qualitative analysis, intervention to increase reporting of ethnicity, outcomes relate to dropout rates	Wrong study design
36.	Neufeld 2013. Walk-in telemental health clinics improve access and efficiency: a 2-year follow-up analysis. Telemedicine and e-Health, 19(12), 938-941.	General population no ethnic minority communities	Wrong population
37.	Parkes 2010. Gods and gurdwaras: the spiritual care programme at the Birmingham and Solihull Mental Health Foundation NHS Trust. Mental Health, Religion & Culture, 13(6), 569-583.	Discussion article	Wrong study design
38.	Polo et al. 2012. Increasing the engagement of Latinos in services through community-derived programs: the Right Question Project-Mental Health. Professional Psychology: Research and Practice, 43(3), 208-216.	Implementation only no evaluation	Wrong study design
39.	Pyke et al. 2001. Improving accessibility: the experience of a Canadian mental health agency. Psychiatric Rehabilitation Journal, 25(2), 180-185.	Implementation only no evaluation	Wrong study design
40.	Rassol 2003. Improving mental health services for ethnic elders. Journal of Advanced Nursing, 43(2), 117-118.	Review of a report	Wrong study design
41.	Rawal et al. 2008. Using decision support to address racial disparities in mental health service utilization. Residential Treatment for Children & Youth, 25(1), 73-84.	No intervention - Examined the association between the introduction of a decision support tool and crisis decision making	Wrong study design
42.	Ryan et al. 2014. Participation in and impact of a depression care management program targeting low-income minority parents in an urban community-based clinic. Clinical Therapeutics, 36(5), 778-790.	No relevant outcomes – length of participation and PHQ-12 scores	Wrong outcome

43.	Savill et al. 2022. Online psychosis screening: characterizing an underexamined population to improve access and equity. Psychiatric Services, 73(9), 1005-1012.	Not an intervention study - retrospective cross-sectional study of online screening data that tests the associations between sociodemographic variables and treatment	Wrong study design
44.	Silverstein et al. 2018. Engaging mothers with depressive symptoms in care: results of a randomised controlled trial in head start. Psychiatric Services, 69, 1175-1180.	Although 66% of the population were Hispanic and the secondary outcome was engagement with services the data had no comparisons across the different ethnic groups.	Wrong outcome
45.	Snowden et al. 1995. Emergency care avoidance: ethnic matching and participation in minority-serving programs. Community Mental Health Journal, 31(5), 463-473.	Association between emergency service use and ethnic matching and language matching in an outpatient service	Wrong outcome
46.	Snowden et al.. 1996. Outpatient service use in minority-serving mental health programs. Administration and Policy in Mental Health, 24(2), 149-159.	Association between general outpatient care (number of visits for assessment, individual and group psychotherapy, medication)	Wrong outcome
47.	Snowden et al. 2006. Strategies to improve minority access to public mental health services in California: description and preliminary evaluation. Journal of Community Psychology, 34(2), 225-235.	Telephone interviews	Wrong study design
48.	Snowden et al. 2013. Spanish-language community-based mental health treatment programs, policy-required language-assistance programming, and mental health treatment access among Spanish-speaking clients. American Journal of Public Health, 103(9), 1628-1633.	Ethnicity of speakers not reported. Spanish speakers with limited English proficiency	Wrong population
49.	Vance et al. 2023. Exploring service use disparities among suicidal black youth in a suicide prevention care coordination intervention. Journal of Racial & Ethnic Health Disparities, 10(5), 2231-2243.	Facilitators in predicting service utilization between Black and White youth	Wrong outcome
50.	Wolkon et al. 1980. Characteristics of clients, staff interventions, and the continuum of care. Journal of Community Psychology, 8(3), 256-260.	Moving from one type of service to another	Wrong intervention
51.	Yasmeen et al. 2004. Engaging communities: a Bradford-based project offers a template for the active involvement of black and minority ethnic communities in initiatives to combat mental ill health. Mental Health Today, 31-33.	A description of a community development project	Wrong study design

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The Health and Care Research Wales Evidence Centre

Our dedicated team works together with Welsh Government, the NHS, social care, research institutions and the public to deliver vital research to tackle health and social care challenges facing Wales.

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Director: Professor Adrian Edwards

Associate Directors: Dr Alison Cooper, Dr Natalie Joseph-Williams, Dr Ruth Lewis

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