



**THE EFFECT OF COGNITIVE BEHAVIORAL THERAPY IN PATIENTS WITH PSYCHOSIS AND SCHIZOPHRENIA: A SYSTEMATIC REVIEW**

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**ABSTRACT**

To investigate the effect of cognitive behavioral therapy in patients with psychosis and schizophrenia. CBT plays a crucial role as an effective therapy in addressing psychotic disorders and schizophrenia by altering cognitive and behavioral patterns, reducing psychotic symptoms, enhancing self-control abilities, addressing cognitive dysfunction, and improving the overall quality of life of patients. Method: A systematic review of the effectiveness of psychological interventions in treating psychosis and schizophrenia focused on cognitive therapy has been conducted. The electronic databases Springer, Science Direct, Proquest, and Clinical Trials were searched using a combination of different search terms. Data were independently extracted by one author, and a synthesis of the results was offered. We identified articles fulfilling inclusion criteria: articles that investigate and report the role of CBT in managing and reducing symptoms and disabilities related to schizophrenia. The majority of research has been cross-sectional and has shown that increased cognitive biases in comparison to healthy controls are associated with psychoses in schizophrenia. The search date was conducted in February 2024, and the search was re-run in March 2024 for new entries. Result: 10 papers were included and reported the effectiveness of cognitive behavioral therapy approach interventions in reducing psychosis. Ultimately, no reliable factors were definitively linked to better outcomes after cognitive therapy. Many potential influences were either not confirmed in other studies or based on weak research. Conclusion: Additionally, studies often examined these factors independently, ignoring their potential interconnectedness (like age and education). Moving forward, researchers need well-designed studies to explore the true impact of these potential factors on treatment response. Understanding these factors can help determine who benefits most from cognitive behavioral therapy and ultimately lead to better outcomes.

Keywords: cognitive behavioral therapy; effect; psychosis; schizophrenia

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**INTRODUCTION**

Psychosis, a debilitating mental illness marked by a disconnect from reality, affects millions worldwide. Experiences like delusions, hallucinations, and disorganized thinking significantly disrupt daily life (de la Serna et al., 2023). This disruption goes beyond the immediate impact of these symptoms, as individuals in the early stages of psychosis often face additional challenges (Demetry et al., 2023). These can be just as impactful as the psychotic symptoms themselves. Studies show that around half of individuals experiencing a first psychotic episode start treatment with depression, and a staggering 80% of those with schizophrenia experience at least one significant depressive episode during the early stages (Kopelovich et al., 2022). For these individuals, depression is linked to poorer overall outcomes, lower functioning in daily life, and a decreased sense of well-being (Peynenburg et al., 2022). Furthermore, low self-esteem is a common experience among those with psychosis. Research suggests a link between low self-esteem, the severity and duration of psychotic symptoms, and poorer overall outcomes. One study exploring the potential benefit of building self-confidence in individuals with psychosis, involving 63 participants who received 26 sessions of cognitive behavioral therapy (CBT) showed significant improvements in self-

belief and self-esteem(Sönmez et al., 2020). This highlights the potential role of emotional factors like depression and low self-esteem in the development and experience of psychosis. As a result, interventions targeting emotional well-being in the early stages of psychosis may be crucial for improving overall outcomes(Stearse et al., 2020). While medication is vital, exploring complementary therapies like cognitive therapy has gained recent attention. CBT is a well-established form of psychotherapy that identifies and modifies unhelpful thoughts contributing to emotional distress (Jägholm et al., 2023). Its success in treating various mental health conditions has prompted researchers to investigate its potential benefits for individuals with psychosis(de la Serna et al., 2023). Studies have shown CBT has a moderate but lasting effect on overall cognitive function and functioning outcomes (Salamanca-Sanabria et al., 2020). Additionally, combining CBT with other rehabilitation forms seems to improve functioning further. Despite its effectiveness, up to 25% of participants may not experience improvement with CT (Curnow et al., 2023). While many studies focused on CBT's efficacy, only a few have explored how individual characteristics, clinical presentations, and other factors might affect treatment response. Researchers emphasize the importance of these studies, even with negative results, to improve personalized CBT approaches(Husain et al., 2023).

This systematic review aims to address this gap in knowledge by identifying potential individual factors at baseline that may predict treatment response and inform the customization of CBT for improved outcomes. Additionally, the current review aims to explore the existing body of research on the effectiveness of CBT in managing symptoms and improving outcomes in individuals diagnosed with psychosis. This article delves into the current research landscape, analyzing existing evidence on CBT's efficacy, examining specific techniques employed in CBT interventions, and discussing limitations or areas requiring further exploration. By examining the potential of CBT as an adjunct treatment, we aim to contribute to a comprehensive understanding of treatment options available for this complex mental health condition. By examining the potential of CBT as an adjunct treatment, we aim to contribute to a comprehensive understanding of treatment options available for this complex mental health condition. However, current knowledge on tailoring CBT for individual needs remains limited.

Therefore, this systematic review aims to examine the current evidence from randomized controlled trials to evaluate the potential effects of cognitive therapy in patients with psychosis. By exploring the existing research base, we hope to identify individual factors that can guide personalized treatment approaches and ultimately improve outcomes for individuals experiencing this debilitating condition. This integration emphasizes the gap in personalization and then introduces the current review's specific goal to analyze the potential of CBT in a systematic way using evidence from controlled trials. It also emphasizes the ultimate goal of improving outcomes for individuals with psychosis and schizophrenia. The study aims to see how well cognitive behavioral therapy reduces symptoms of schizophrenia such as hallucinations and lack of motivation. In addition, the study also compares CBT with other treatments to see which is more effective. Researchers also want to know whether the patient's age, gender, or illness duration affects the therapy outcome. Other factors such as intensity of therapy, type of CBT, and family support will also be studied to see how they affect the success of therapy.

## **METHOD**

A literature search was conducted in February-March 2024. This study used secondary data obtained from previous research rather than direct observation. The data source was articles

from reputable international journals indexed in Scopus Quartile 4 (Scopus Q4) or higher, with the theme of the influence of cognitive behavioral therapy on psychosis and schizophrenia patients. This systematic review used high- and medium-quality articles from Scopus, Science Direct, and Proquest. The keywords used were "cognitive behavioral therapy AND psychosis AND schizophrenia. The Joanna Briggs Institute (JBI) Critical Appraisal Tools or JBI was used to assess the quality of the articles. The type of JBI was adapted to the design used. The JBI assessment has a choice of answers: "yes", "no", "unclear" or "not applicable". A score of 1 was given for a "yes" answer and 0 for other answers. The critical appraisal stage aims to assess the quality of an article. An article was included in this study if the JBI score was more than 70% fulfilling the critical appraisal criteria, indicating that it was eligible and included in the systematic review. This was done to ensure that the articles in this systematic review were of high quality and to avoid low-quality studies that could bias the validity of the results. In this section, the reviewers selected journals or articles based on the predetermined keywords before creating the PICOS format as an indicator of article eligibility assessment.

## RESULT

Table 1.  
PICOS

Criteria	Inclusion	Exclusion
Population	Studies that focus on cognitive therapy interventions in psychosis and schizophrenia patients	Studies focus on other types of mental health disorders besides psychosis and schizophrenia.
Intervention	Studies reporting observed rates of offer, referral, or receipt of any recommended cognitive behavioral therapy or therapeutic intervention delivered as part of routine clinical care or service evaluation project (i.e. not as part of a clinical trial, or other study involving randomisation to condition).	Studies that do not intervene in psychosis and schizophrenia patients
Comparison	The comparison intervention group is a group that is only observed and not given an intervention	No exclusion criteria
Outcome	Papers reporting proportions of service users being offered and/or receiving recommended CBT intervention	Studies that do not discuss CBT intervention in psychosis and schizophrenia patients
Study Design and Publication Type	Randomized controlled trials, quasi-experimental studies, and case reports	Studies with non-controlled designs
Publication Year	Studies published in the last 5 years (2019-2024) to ensure consideration of recent advancements in the field.	Before 2019
Language	English	Other than English

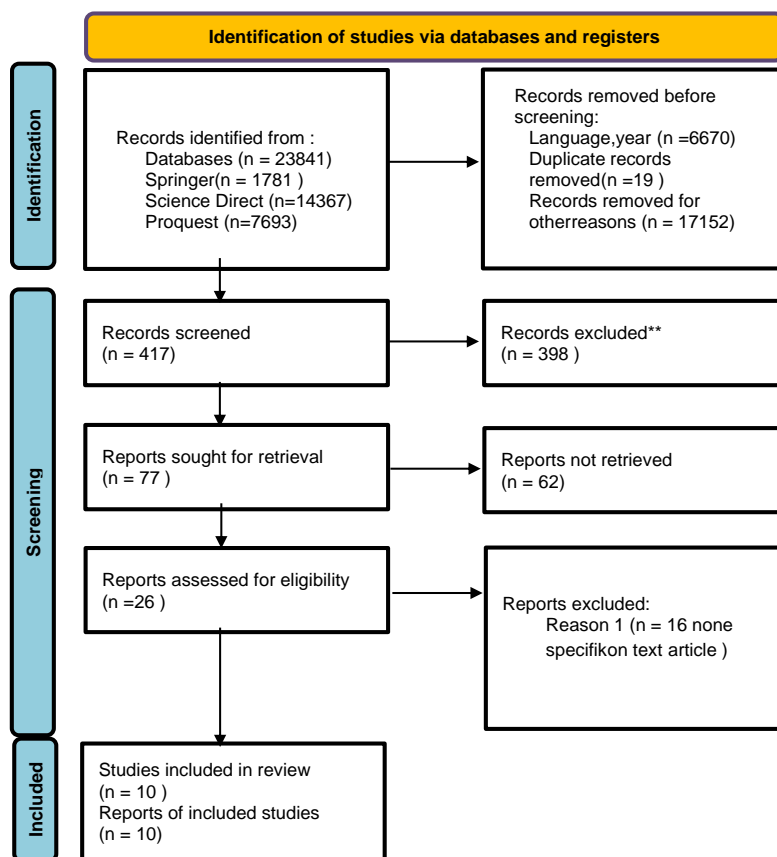


Table 2.  
The adjusted search terms as per searched electronic databases

Database	Search Query	Results
Springer	cognitive behavioral therapy AND ; AND psychosis AND ;AND schizophrenia	1781
ScienceDirect	cognitive behavioral therapy AND ; AND psychosis AND ;AND schizophrenia	14367
Proquest	cognitive behavioral therapy AND ; AND psychosis AND ;AND schizophrenia	7693

Table 3.  
Quality assessment using a JBI quality assessment tool for prevalence studies.

Study	D1	D2	D3	D4	D5	D6	D7	D8	D9	Overall Quality of the study
(Pot-Kolderet al., 2020)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
(Hayward et al., 2021)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
(Jeppesen et al., 2022)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
(Wood et al., 2022)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
(Clemmensen et al., 2024)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High

Study	D1	D2	D3	D4	D5	D6	D7	D8	D9	Overall Quality of the study
(Sönmez et al., 2020)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
(Pos et al., 2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
(Tolmeijer et al., 2023)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
(Peters et al., 2022)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
(Miranda, Rego, Romero, & Moreira, 2024)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High

*Note:*

D1: Was the sample frame appropriate to address the target population? D2: Were study participants sampled in an appropriate way?

D3: Was the sample size adequate?

D4: Were the study subjects and the setting describe in detail?

D5: Was the data analysis conducted with sufficient coverage of the identified sample? D6: Were valid methods used for the identification of the condition?

D7: Was the condition measured in a standard, reliable way for all participants? D8: Was there appropriate statistical analysis?

D9: Was the response rate adequate, and if not, was the low response rate managed appropriately?

**RESULT**

**Overview of Included Studies**

A total of 23841 records were identified from database searches, and 417 were screened at title/abstract stage after duplicates were removed; 77 reports were identified as potentially eligible and sought for retrieval; 26 records were screened at full-text review, with a total of 10 unique studies being identified as eligible for inclusion in the review. See Fig. 1 (PRISMA diagram) for a summary of how studies were selected. Overview of study design and characteristics can see of the 10 included studies. Table 1. Included studies came from 9 diferent countries, Netherlands (n=3), United Kingdom (n=3), Denmark (n=2), Norwegian (n=1), Portugal (n=1). Ten studies were from Early Intervention teams with the remainder including a range of clinical settings including recovery teams, community mental health teams, public services, individuals following discharge from hospital, inpatient units, and outpatient clinics. Studies reported data mainly collected through audits of healthcare records or service user/staf surveys; however, many studies did not provide specific details of how data were collected. CBT intervention for Virtual Reality (VR) (n=3), Voices and treatment as usual (GiVE) (n=1), Crisis-Focused (CF) (n=1), Rumination-Focused (RF) (n=1), Psychological challenges and Tailor (n=1), Focused-Social Activation (n=1), Feeling Safe and Peer Counselling (n=1), Trauma-Focused (TF) (n=1). Most studies reported data from over a 12-month period (n=4). Other time frames included 4 months (n=1), 6 months (n=1), 9 months (n=1), 2 years (n=1), 3 years (n=1) and not specified (n=1). Randomized controlled trial (RCTs) were reported in 10 articles.

Table 4.  
characteristics of the study subjects

Study	Sample size	Sample requirement	Age	Country
(Pot-Kolderet al., 2020)	N= 116	in seven treatment centers in the Netherlands	18-65 years	Netherlands
(Hayward et al., 2021)	N= 90	Across two sites in the UK: (1) Sussex Partnership NHS Foundation Trust (suburban and rural); and (2) Pennine Care NHS Foundation Trust (suburban and urban).	16-18 years	UK
(Jeppesen et al., 2022)	N=256	in the university hospitals at Mental Health Center Copenhagen and Aalborg university hospital	≥ 18 years	Denmark
(Wood et al.,2022)	N= 60	at a single NHS site, North East London NHS Foundation Trust in the acute mental health inpatient services	≥ 18 years	UK
(Clemmensen et al., 2024)	N=60	in Mental Health Center Glostrup, Mental Health Services in Capital Region of Denmark,	18-35 years	Denmark
(Sönmez et al., 2020)	N= 63	h the ongoing multi-center Thematically Organized Psychosis (TOP) Study at NORMENT KG Jepsen Centre	18-65 years	Norwegian
(Pos et al.,2019)	N= 99	Four early psychosis treatment centers in the Netherlands and one general mental health service in the Netherlands	18 and 36 years	Netherlands
(Tolmeijer et al., 2023)	N=190	Outpatient services of several large mental health organizations in the Netherlands	≥ 16 years	Netherlands
(Peters et al.,2022)	N= 300	In sites across England (South London and Maudsley (SLaM); Greater Manchester Mental Health; Cumbria, Northumberland, Tyne and Wear; Oxford Health; Sussex Partnership)	< 18 years	UK
(Miranda et al., 2024)	N= 21	High School (education level 3), eight held a bachelor’s degree (education level 6), one held a master’s degree (education level 7) and two held a PhD degree (education level).	18-60 years	Portugal

Table 4.  
Characteristics of CBT Interventions Used in the Included Studies

Study	Study type	Intervention	Control condition	Health technology	Target outcomes	Results
(Pot-Kolderet al., 2020)	RCT	Virtual reality-based cognitive behavioral therapy (VR-CBT)	Treatment as usual (TAU)	Hardware, software and training	Supportive behaviors (motivation, skills, frequency and social connection (compassion, connectedness). Mental health (well-being, symptoms) and personal growth (self-efficacy, civic engagement).	From a societal standpoint, VR CBT to be cost efficient in the short term. However, to determine the impact of more VR-CBT sessions and their long-term benefits, we need to directly measure QALY: (quality-adjusted

							life years).
(Hayward et al., 2021)	RCT	Guided self-help intervention for Voices (GiVE)	Treatment as usual (TAU) and Supportive Counselling (SC)	The workbook and the self-help book mobile phone application.	Depressive symptoms, hopelessness, agency, generalized anxiety	CBTp is a recommended therapy for psychosis in the UK, Researcher developed a shorter, easier to-deliver version of CBTp called GiVE to address this.	
(Jeppesen et al., 2022)	RCT	Virtual reality-based cognitive behavioral therapy (VR-CBT)	No treatment, wait list control: 128/256, 50%	Social software	Work	The main outcome to be measured is the severity of suicidal thoughts. Secondary outcomes include depression, anxiety, distress and overall well being.	VR-CBT will not only assess its effectiveness for paranoia, but also explore factors influencing its success and how it works. This could help identify ideas and improve future treatment approaches.
(Wood et al., 2022)	RCT	Crisis-focused CBT	No treatment, assessment, formulation, relapse prevention	Phone or video conferencing technology		Focuses on anxiety, depression, and how people perceive their mental health.	Practical to evaluate and modified CBT for inpatients with mental health issues. The findings will help design a larger trial. This research is important because it caters to diverse patients and addresses the need for better treatment options and lower readmission rates for this population
(Clemmensen et al., 2024)	RCT	Rumination-focused cognitive behavioral therapy (RFCBT)	No treatment, assessment only control	Medical treatment psychoeducation, training symptom management		Six domains of negative symptoms including anhedonia, lack of normal emotional discomfort, asociality,	People with psychosis often struggle with rumination (dwelling on negative thoughts), negative symptoms

					avolition, dampened affect and alogia	(reduced motivation, social withdrawal), and depression. There's limited research on how therapy focuses on rumination can help.
(Sönmez et al., 2020)	RCT	Psychological challenges and Tailor	Treatment as usual (TAU)	Video recording and intervention plus app-based autoPlacebo minimal	Depressive symptoms (primary outcome) and increase self-esteem (secondary outcome)	Cognitive behavior therapy (CBT) for early psychosis didn't improve their depression or self-esteem compared to standard treatment (TAU).
(Pos et al.,2019)	RCT	Social activation (CBTsa)	Comparison of 2 active intervention groups (comparative efficacy)	Trainings video: for the BNSS	Primary outcomes: depression severity, anxiety	sustained additive effect of CBT targeting negative symptoms may be more likely in more chronic patient group: that show enduring negative symptoms and dysfunctional beliefs
(Tolmeijer et al., 2023)	RCT	Feeling Safe and Peer Counselling	Comparison of 2 active intervention groups (comparative efficacy)	a face-to-face meeting and Video conferencing system	Depressive symptoms (primary outcome) and increase self-esteem (secondary outcome)	The Feeling Safe-NL program tackle core issues faced by people with persecutory beliefs, regardless of their diagnosis. This study compares its effectiveness and cost-efficiency to the standard treatment, CBTp.
(Peters et al., 2022)	RCT	Trauma-focused cognitive behaviour therapy for psychosis (TF-CBTp)	No control group	Video intervention plus app-based autoPlacebo minimal: enhanced webIMPACTf	Psychotic symptoms such as delusions and hallucinations.	Combined therapy for people with complex mental health needs often linked to past trauma. Positive

							results would benefit patients therapists, and the healthcare system. The therapy could significantly reduce trauma symptoms like PTSD and psychosis for many people.
(Miranda et al., 2024)	RCT	VR Serious Game	No control group	Hardware Software	and	Negative symptoms associated with schizophrenia.	VR game with promising results, suggesting VR could be a helpful addition to existing treatments. VR has the potential to make treatment more affordable and accessible to more people.

**Characteristics of CBT Interventions Used in the Included Studies.**

They studied how many people with psychosis were offered and received CBT therapy. It's important to distinguish between being offered and receiving therapy. Two studies found low rates of both being offered and receiving CBT in general mental health teams (around 6-11%). One study focusing on early intervention teams found a much higher offer rate (68%) but a similar receipt rate (6.5%) compared to general teams (Peters et al., 2022; Pos et al., 2019; Sönmez et al., 2020). This might be because offering therapy isn't always well documented. Overall, around 23% of people with psychosis were offered CBT, and 24% received it. There was a lot of variation between studies (high heterogeneity). Even studies without clear treatment guidelines showed similar offer rates to those with guidelines (de la Serna et al., 2023; Husain et al., 2023; Weintraub et al., 2023; Wood et al., 2022). People with psychosis in early intervention settings seemed more likely to receive CBT (around 41%). Out of 4 studies with over 7,000 participants, around 23% reported receiving CBT. This number is similar when looking at a larger group of 15 studies with over 42,000 participants (around 24%). There's a big difference between studies (high heterogeneity). Even when considering studies with or without clear treatment guidelines, the offer rate for CBT stays around 20-24%. Patients in Early Intervention settings seem to be offered CBT more often (around 41% in 6 studies with over 11,000 participants). Our analysis suggests that people with psychosis who receive treatment in early intervention programs are more likely to get a specific therapy called CBT compared to those in other treatment settings. When we looked only at studies from early intervention programs, about 41% of participants received CBT, which is significantly higher than the average rate of 24% across all studies (Clemmensen et al., 2024; Hayward et al., 2021; Jeppesen et al., 2022; Pot-Kolder et al., 2020; Tolmeijer et al., 2023).

### **A comprehensive analysis of factors influencing the likelihood of individuals being offered or receiving therapy**

Researchers looked for factors influencing who receives therapy in various studies. However, due to differences in how data was collected (e.g., age groups weren't categorized consistently), combining the results statistically wasn't meaningful. Instead, they summarized the findings in a narrative format (see Table S2 in Appendix 2 for details). Several studies looked at whether age affects who gets therapy for psychosis, mostly focusing on CBT. Four studies found younger patients were more likely to receive CBT than older patients. One study didn't find a significant difference based on age. There were mixed findings on gender - one study found women were more likely to get CBT, but three others didn't find a gender difference. Several studies investigated factors influencing who receives CBT therapy. Findings were mixed. One study showed white patients were more likely to receive CBT than black patients, while others found no difference based on ethnicity. People with non-affective psychosis or a diagnosis other than schizophrenia were more likely to get CBT compared to those with affective psychosis or schizophrenia. Having additional diagnoses like depression, bipolar disorder, or anxiety also seemed to influence CBT access. These findings suggest potential unequal access to CBT therapy depending on ethnicity and diagnosis.

### **DISCUSSION**

This research review aimed to analyze existing information on how often people with psychosis receive recommended psychological treatments in everyday clinical care around the world. We also wanted to summarize the available data on factors that influence whether someone receives psychological therapy, such as the type of service offered, age, and ethnicity. We found data from 3 different countries across (UK, Denmark, Norwegian). All the countries were classified as high-income by the World Bank. This shows a lack of data from low and middle-income countries, as well as from high-income countries outside the UK (de la Serna et al., 2023; Weintraub et al., 2023; Wood et al., 2022). Our study found that not many people with psychosis received the recommended treatments (cognitive behavioral therapy - CBT). Only around a quarter (23-24%) got offered CBT and received it. TAU was slightly more common at 30%. Looking only at early intervention services, CBT use was higher (41%) but TAU remained similar (32%) (Jauhar et al, 2019). However, the results from different studies varied a lot, so the overall numbers might not be entirely accurate. Unfortunately, most studies (6 out of 10) didn't provide details about who was more likely to get treatment (e.g., age, ethnicity). Even if they did, the information couldn't be combined effectively because each study used different definitions and reporting methods. While some studies suggested younger people might be more likely to receive treatment, there wasn't a clear overall pattern (Ma et al., 2019). This might be because early intervention services, which are more likely to offer treatment, typically deal with younger individuals experiencing their first episode of psychosis (Feusner et al., 2022; Kopelovich et al, 2022; Mazumdar et al., 2023; Peynenburg et al, 2022).

International guidelines recommend psychological therapies alongside medication for schizophrenia (Nakao et al, 2021). However, this review finds these therapies are much less available than medication. Almost everyone with schizophrenia can get medication, but many stop taking it. In contrast, only about a third of people receive the recommended therapies (CBT and TAU) (Alkhaldeh et al., 2025). This varies widely between and within countries. The lack of clear treatment guidelines may not affect how often these therapies are offered. But there weren't enough studies on this to be sure. These findings are similar to a previous review that only looked at studies in the UK. The big difference in therapy rates between studies is likely due to how they defined "offered" or "received" therapy, and how they

collected data (Curnow et al., 2023; Jägholm et al., 2023; Medard et al., 2023; Salamanca-Sanabria et al., 2020). Our study found that Cognitive Behavioral Therapy for psychosis (CBT) is more commonly used in early intervention programs compared to other mental health services. This might be because some countries have policies to improve care for people experiencing their first psychotic episode. These policies aim for a fast recovery and to minimize the impact on a person's daily life. For instance, the UK health system has a standard where half of people with a first episode must begin treatment within two weeks. This treatment should follow the recommended guidelines. Early intervention programs for psychosis are becoming more popular worldwide, which could mean more people have access to therapy (Bernstein et al., 2022; Bos et al., 2023; Haugen et al., 2022; Musoni-Rwililiza et al., 2022). However, our findings suggest that access to recommended therapies might be lower outside of these programs. To improve access to these therapies, we need to understand what makes it difficult or easy to provide them (Jameel et al, 2025). Other studies have shown challenges at different levels, such as within organizations, for staff, and for the people seeking help (Pelizza et al., 2022). These challenges include staff being hesitant to refer people for therapy, a lack of training for staff to deliver the therapy, and a focus on medication over therapy (Kart et al, 2021). Similar problems were found in a study of staff attitudes in Norwegian and Portugal.

We followed best practices for conducting systematic reviews and meta-analyses, as outlined by Cochrane review standards. This included creating and pre-registering a detailed review protocol, documenting any changes made to the protocol, and having two reviewers independently assess all records at both the title/abstract and full-text stages (Russell et al, 2025). Our searches identified over 10,000 records, indicating a thorough search effort. However, some relevant studies might have been missed due to the challenges of writing effective search strategies for such a broad topic (Demetry et al., 2023; Hudays et al, 2022; Katsushima et al., 2023; Lindsäter et al., 2019; Sauvé et al, 2022; Steare et al., 2020). We excluded grey literature from our search assuming the data we needed would be more likely found in peer-reviewed publications. This decision could have potentially excluded relevant studies. Additionally, our inclusion criteria focused on studies that reported data on interventions included in treatment guidelines. It's possible that relevant data from studies reporting on therapeutic interventions that were not clearly defined and therefore not classified as "recommended" might have been missed. While we were aware of relevant government reports in the UK before starting the study, we were unable to find similar data from other countries, which could also be a limitation.

While the studies included generally had strong methods, the wide variety of approaches and settings across them made it difficult to combine the results effectively. For instance, some studies used reliable methods to assess therapy delivery and uptake, like independent reviews of electronic health records with specific keywords. Others relied on methods prone to bias, like interviewing service users with psychosis, where participation wasn't guaranteed (Xu & Zhang, 2023). Additionally, there were significant differences in how interventions were defined, including therapy content, session numbers, and therapists involved. For example, UK NICE guidelines recommend CBT for at least 16 sessions, but most studies defined "receiving therapy" much lower, with participants attending just one or two sessions. We focused on rates within regular care, so we excluded data from randomized controlled trials. However, including various other study designs increased the overall variation in the reviewed studies. This was a practical decision, as studies can range from observational to interventional, rather than falling neatly into one category (Hronis et al, 2022; Küçükaksu et al, 2023; Loughnan et al., 2022; Riebel et al., 2023; Schutt et al., 2022; Stouwe et al., 2022).

Unsurprisingly, service evaluation projects closer to the interventional end were more likely to report higher therapy receipt rates. For instance, two studies with the highest CBTp rates (around 60%) evaluated outcomes from newly established services for first-episode psychosis, which offered guaranteed access to recommended therapies as part of the care pathway. This isn't typical across most services

## CONCLUSION

This systematic review will contribute valuable insights into the potential role of CBT in managing psychosis and schizophrenia. By evaluating the effectiveness of CBT interventions, this review can inform evidence-based clinical practices and guide future research directions in supporting individuals living with this challenging condition. This review found that the percentage of people receiving recommended therapy for psychosis and schizophrenia differed greatly across nine countries. However, the low overall rates suggest there's a significant need to improve access to these treatments, as recommended by clinical guidelines. It's important to note that most of the available data focused on the UK, with no studies found from South America, Asia, or Africa. This means we currently lack a complete global understanding of how these therapies are provided.

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