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REVIEW ARTICLE

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Scoping review of stepped care interventions for mental health and substance use service delivery to youth and young adults

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Abstract

Aims: Many young people with mental health and/or substance use concerns do not have access to timely, appropriate, and effective services. Within this context, stepped care models (SCMs) have emerged as a guiding framework for care delivery, inspiring service innovations across the globe. However, substantial gaps remain in the evidence for SCMs as a strategy to address the current systemic challenges in delivering services for young people. This scoping review aims to identify where these gaps in evidence exist, and the next steps for addressing them.

Methods: A scoping review was conducted involving both peer-reviewed and grey literature. Eligible studies explored SCMs implemented in the various health care settings accessed by young people aged 12–24 seeking treatment for mental health and substance use challenges. After screening titles and abstracts, two reviewers examined full-text articles and extracted data to create a descriptive summary of the models.

Results: Of the 656 studies that were retrieved, 51 studies were included and grouped by study team for a final yield of 43 studies. Almost half of the studies were focused on the adult population (i.e., 18 and over), and most did not specify interventions for young people. Among the SCMs, substantial variability was found in almost every aspect of the models.

Conclusions: Considering the current body of evidence, there is an urgent need for a consensus position on the definition, implementation, and outcome measures required for rigorously assessing the utility of SCMs for young people.

KEYWORDS
care delivery, service transformation, stepped care models, young adult mental health, youth mental health

1 | INTRODUCTION

Globally, mental health and substance use (MHSU) disorders have become one of the most significant health issues facing youth and young adults (YYAs) (Hetrick et al., 2017; Kieling et al., 2011; McGorry & Goldstone, 2016; Mokdad et al., 2016; Patel et al., 2007). They are the leading cause of health-related disability in young people, with an estimated 10%–20% of adolescents worldwide experiencing mental health conditions (Kessler et al., 2005; Polanczyk et al., 2015). Seventy-five percent of MHSU disorders emerge before the age of 25, and about 50% of those become apparent by the age of 14–15 (Kessler et al., 2005, 2007; Kim-Cohen et al., 2003). In many parts of Canada, as few as 25% of YYAs with MHSU disorders receive timely and appropriate care while addressing their developmental needs and goals (Farris et al., 2019; Gill et al., 2017; Henderson et al., 2017; Hetrick et al., 2017). YYAs and their families report 'falling through the cracks' and finding mental health systems uncoordinated, adult-oriented, and difficult to both access and navigate (Farris et al., 2019; Kokanović et al., 2018; MacDonald et al., 2018). Prevention and early treatment of mental health challenges are widely recognized as essential for young people to achieve their full potential (Anderson & Lowen, 2010; Rickwood et al., 2007).

In response to the global concern of MHSU disorders affecting young people, new models of youth-specific mental health services focusing on reforming service delivery to increase early access to care have been established in recent years (Hetrick et al., 2017; McGorry, 2019; McGorry & Goldstone, 2016; Settipani et al., 2019; Shah et al., 2020). Examples of these youth-specific services can be found in Australia, the United Kingdom, Ireland, Canada, Denmark, as well as parts of Asia and the United States (Birchwood & Singh, 2013; Douleh, 2013; Henderson et al., 2017; Hetrick et al., 2017; Hickie et al., 2019; Illback & Bates, 2011; Malla et al., 2016; McGorry et al., 2013; McGorry & Goldstone, 2016; Rao et al., 2013; Verma et al., 2012). To optimize the access and efficiency of MHSU services for YYAs, stepped care models (SCMs) have emerged as one of the recommended frameworks for mental health care delivery (Bower & Gilbody, 2005; Cross & Hickie, 2017; Katon et al., 1997; Scogin et al., 2003).

The primary goal of stepped care is to organize services, given limited resources, such that the appropriate form and intensity of care are provided in response to an individual's needs. The existing literature on stepped care describes it as a system of service delivery where the least intensive and intrusive interventions are provided to individuals with less acute needs (Bower & Gilbody, 2005). The lowest-intensity treatments delivered within a SCM (e.g., watchful waiting, guided self-help, bibliotherapy) typically involve minimal time and costs to the consumer, clinicians, and service providers (Cross & Hickie, 2017). In some cases, individuals are 'stepped up' or 'stepped down' to appropriate-level interventions after assessments of symptom severity or increased functional impairment (Hermens et al., 2015). There is careful evaluation before delivering intensive treatments with greater costs (such as specialist clinician time) and increased personal investment or commitment (such as day treatment or inpatient programs) (Bower & Gilbody, 2005; Rapee et al., 2017; Seekles et al., 2011). More recent guidelines on SCMs also recommend stratified and progressive forms of stepped care (Boyd et al., 2019; National Institute for Health and Care Excellence, 2011). In the stratified model, the selection of a lower or higher intensity treatment is made by the assessing therapist while the lowest intensity treatment is consistently provided first in a progressive model (Boyd et al., 2019).

Despite the increasing attention garnered by SCMs as an approach to mental health services planning, there remain substantial gaps surrounding the formation, implementation, operation, and outcomes expected of SCMs (Firth et al., 2015; Richards et al., 2012). Specifically, there is limited data on: the ideal number of steps and the range of treatments delivered within each step; the proportion of clients who require direct access to higher intensity treatments; the process of decision-making to 'step-up' or 'step-down' to a higher or lower intensity of care; and the degree to which SCMs should be responsive to local context (e.g., reflective of existing resources and personnel) (Richards et al., 2012). The question remains: what evidence is there for SCMs as a strategy to address current systemic challenges in delivering MHSU services for YYAs? The following scoping review assesses the available peer-reviewed and grey literature to provide a descriptive summary of the models and outcomes associated with MHSU SCMs for YYAs aged 12–24 and discusses some of the next steps for addressing gaps in the existing literature.

2 | METHODS

2.1 | Search strategy

We divided our review into two stages. In the first stage, we conducted a scoping review of the available literature to create a descriptive summary of the SCMs. This included an analysis of the similarities and differences between existing SCMs and the specific consideration for YYA populations that each model seeks to address. In the second stage, we applied a systematic approach, using the Cochrane Collaboration's GRADE (Grading of Recommendation, Assessment, Development and Evaluation) methodology (Balshem et al., 2011; Murad et al., 2017), to assess the strength of the evidence to determine the effectiveness of SCM for improving mental health outcomes in 12- to 24-year olds. This paper will examine the results of stage one; the results from the systematic review are being separately prepared for publication.

The search strategy, including keywords and preliminary inclusion and exclusion criteria for review, was developed by our research team with the support of an YYA MHSU clinician advisory group in late May 2018. The initial literature search was conducted in the summer of 2018 and updated in the summer of 2020. The described search strategy, as well as the studies included in the review and the analysis, reflect the combined efforts of both searches. Figure 1 depicts the detailed flow diagram of the scoping review while Figure 2 outlines the inclusion and exclusion criteria in detail. Overall, two reviewers

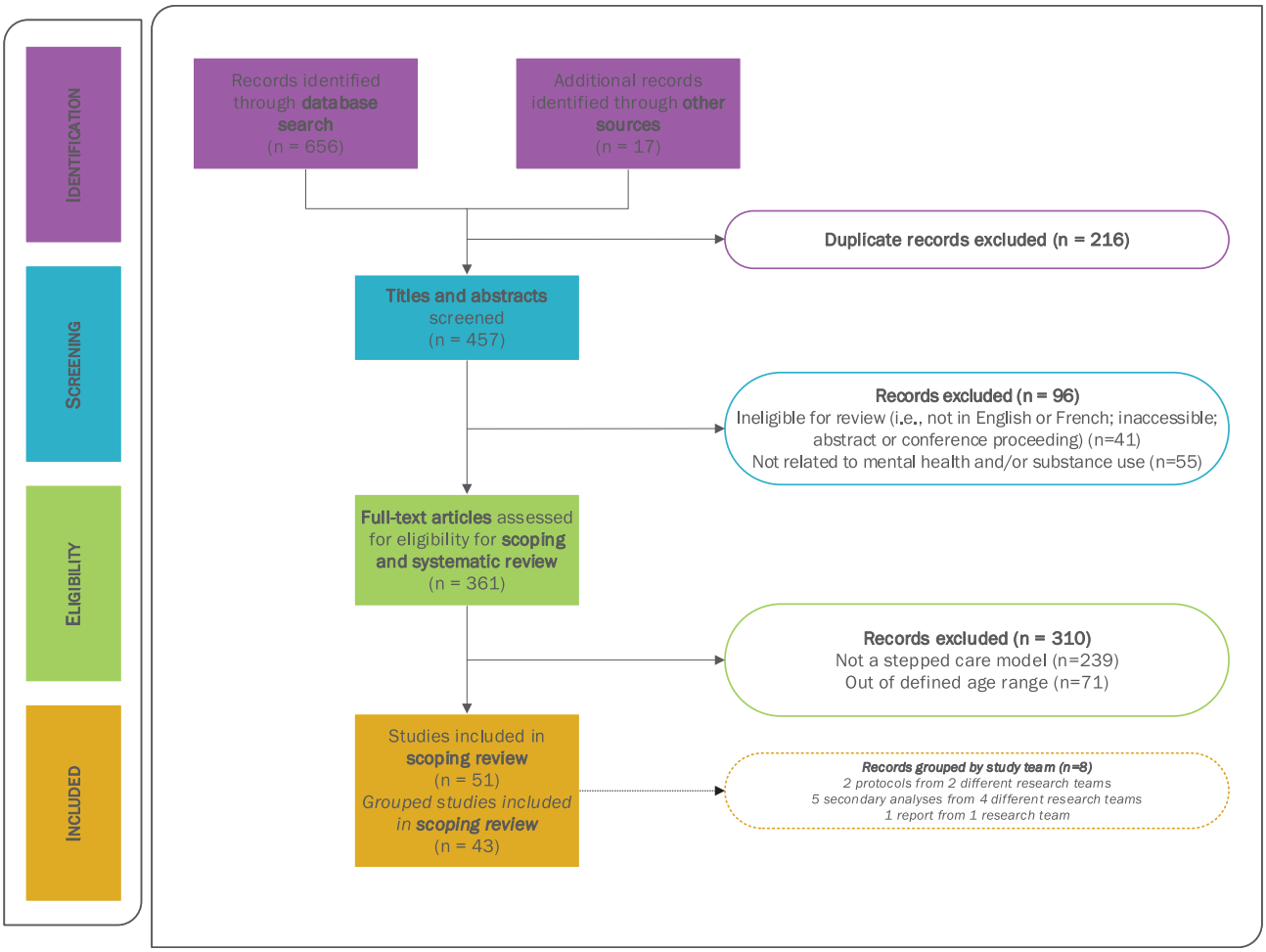

FIGURE 1 Flow chart of scoping review adapted from PRISMA (Moher, Liberati, Tetzlaff, & Altman, 2009)

(M. B. and S. F.) identified 51 relevant articles to include in the scoping review. We grouped studies that were similar enough to analyse together (i.e., studies that used the same sample of participants and/or stepped care design), which yielded a total of 43 'grouped' studies from 42 study teams. One pilot study and one randomized controlled trial from the same study team were deemed to be sufficiently different from each other to be considered separate studies (Borsari et al., 2007, 2012).

2.2 | Data extraction and analysis

Two independent assessors (M. B. and S. F.) examined each study and differences were discussed among the review team (including the senior investigator, A. S.) until consensus was reached. We categorized and analysed the studies according to their age range (i.e., child, YYA, and adult). Studies that overlapped with the lower end of the defined age range (e.g., 12 and under) were categorized as child-focused, studies with an age range that was within the defined age range were categorized as YYA-focused, and studies that overlapped with the higher end of the age range (e.g., 18 and above) were categorized as adult-focused.

To gain a deeper understanding of how treatments varied by step, we used an inductive analytic approach to categorize the treatments utilized in the SCMs based on treatment intensity. We defined treatment intensity by looking at a combination of: (a) patient engagement and treatment duration, (b) level of clinician involvement and expertise, and (c) whether or not the therapy necessitated referral and/or treatment outside of the SCM. These indications of treatment intensity were interpreted at face value using only the descriptions provided in the articles. Each therapy provided in the SCMs was coded and organized according to the categories of treatment intensity and their corresponding step in the SCM. The exploration of treatment intensity by step level allowed us to examine how treatments and treatment intensities varied across SCMs, what constituted 'stepping' up or down across SCMs, and different modalities of early intervention.

3 | RESULTS

3.1 | Characteristics of the literature

In this section, we assess and summarize the general characteristics of the studies included in this scoping review. The 51 unique studies

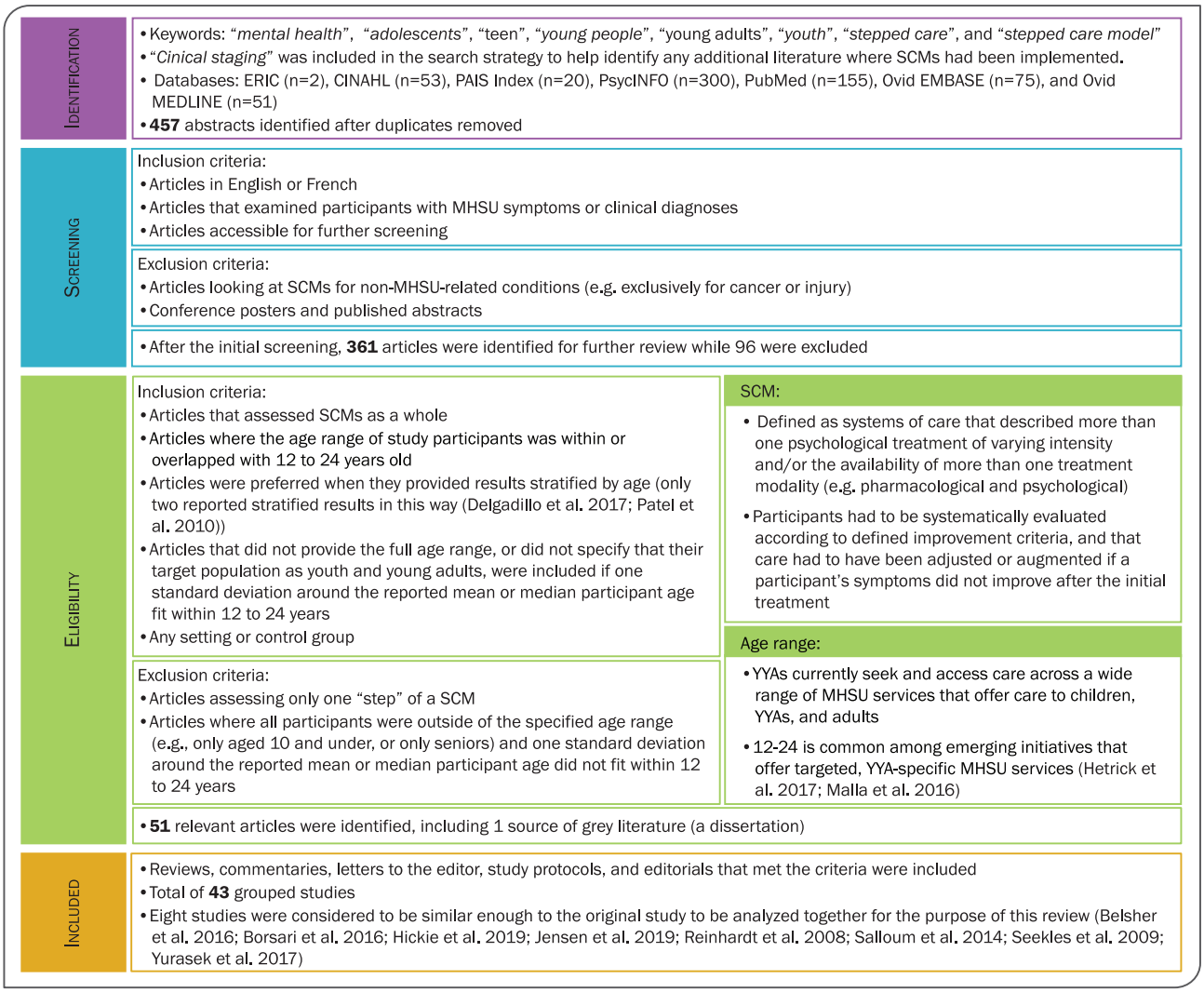

FIGURE 2 Inclusion and exclusion criteria and process

were published between 1993 and 2020, with 2014 being the median year of publication. Overall, almost half (43%, $n = 22$) of the studies were experimental (see Figure 3). However, the majority of the YYA-focused studies were non-experimental designs (87%, $n = 13$). Among the 43 grouped studies, almost half of the studies (40%; $n = 17$) were published in the United States (see Figure S1).

3.2 | Characteristics of the study populations

In this section, we review the study population characteristics of the 43 grouped studies. Overall, a total of 46 116 unique participants were included across all studies. For participants in randomized controlled trials (RCTs) or variations of RCTs, 7735 were in stepped care and 9281 were in control conditions. The sex ratio of the participants who received a stepped care intervention was 36.3% male and 63.7% female. In studies where sex was reported separately for participants in control conditions that did not receive the stepped care intervention, 30.4% were male and 69.6% were female. No study reported on sex and/or gender outside of the male and female binary. The documented age range of participants was 7–92 years old. The median mean age of the participants was 30.9 years and the average mean age was 27.7 years with a SD of 16.8 years, indicating that there was considerable variability in participants' ages and that, in general, the study populations were of adult age (see Figure 4). Indeed, almost half (47%, $n = 20$) of the currently available literature focused on stepped care interventions for the adult population, while 28% ($n = 12$) focused on YYAs and 26% ($n = 11$) focused on children. We noted specific subpopulations of interest including college students ($n = 4$), individuals in the military ($n = 1$), and pregnant or postpartum women ($n = 1$). Last, 49% ($n = 21$) of the identified literature focussed on symptom management of depression and/or anxiety, or on preventing progression of mild or moderate symptoms to a more severe form (see Figure 5). Notably, relatively few studies (9%; $n = 4$) looked at SCMs for treatment of substance use and only one study included in the review examined services for combined MHSU (Kay-Lambkin et al., 2010). Similarly, very few studies (5%, $n = 2$) reported on SCMs for eating disorders.

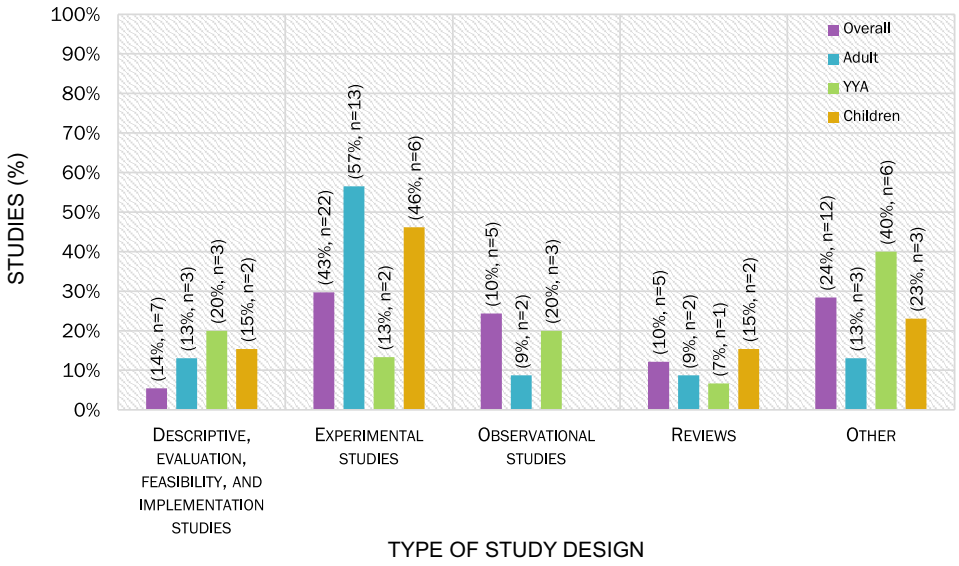

FIGURE 3 Proportion of studies by type of study design (overall $n = 51$; adult $n = 23$; youth and young adult [YYA] $n = 15$; children $n = 13$). Other study designs included: Secondary analyses studies using regression analyses or predictive modelling; commentaries; study protocols; and, a report

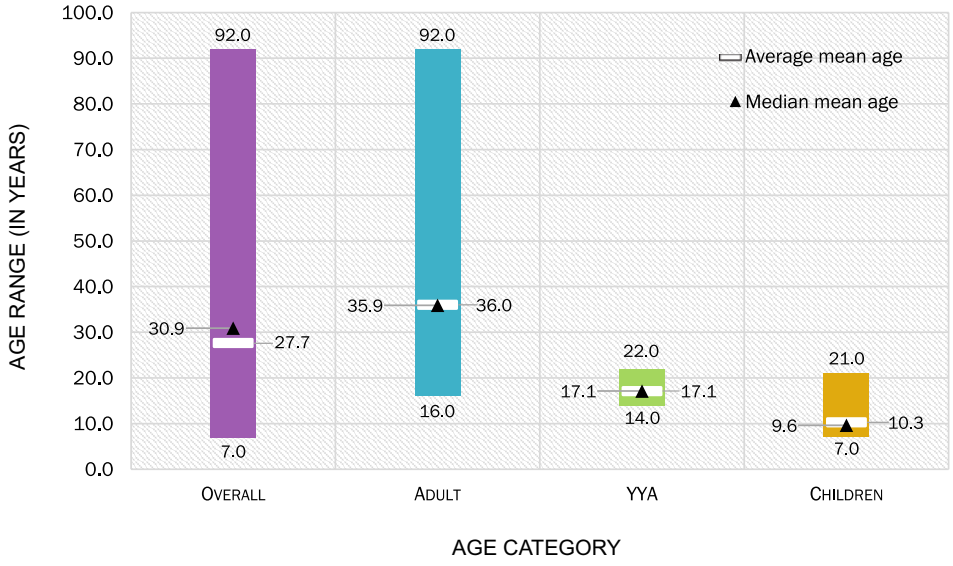

FIGURE 4 Age range by age category. Note that the age range is represented by the coloured bar corresponding to each age category, with the minimum and maximum ages noted at the bottom and top of the bar, respectively. The average mean age is represented by the white line on the bar with the corresponding value noted on the right side. The median mean age is represented by the black triangle with the corresponding value noted on the left side

3.3 | Characteristics of the stepped care interventions

Overall, we found considerable heterogeneity in the SCMs described in the 43 grouped studies in our scoping review, with differences in the number of steps, treatment type and intensity, professionals involved in providing care or guidance, setting, and criteria for stepping up.

3.3.1 | Number of steps

Thirty-five (81%) studies specified the number of steps in their stepped care intervention and the number of steps per model ranged from two to nine steps with a median of three steps. The child- and YYA-focused studies both had a median of three steps in comparison to the adult literature, which had a median of four steps. The YYA-focused studies had more studies with a greater number of steps, that is, five steps ($n = 2$) and nine steps ($n = 1$), than the other age categories (see Figure 6). Of note, two of the studies with five steps described their model of care as 'stepped collaborative care' where some of the steps included liaising between professionals as part of the collaborative approach to care. Similarly, Adewuya et al. (2019) described the fourth step intervention in their model as support and supervision from the consulting mental health team, which provided both clinical support and supervision to the community-based teams offering care.

The eight studies that did not specify the number of steps in their SCM were commentaries ($n = 3$) (Birleson & Vance, 2008; Cross & Hickie, 2017; Silverman et al., 2016), a case study ($n = 1$) (Paris, 2015), a descriptive study (1) (Marlatt et al., 1993), a variation RCT ($n = 1$) (Zatzick et al., 2013), a protocol ($n = 1$) (Courtney

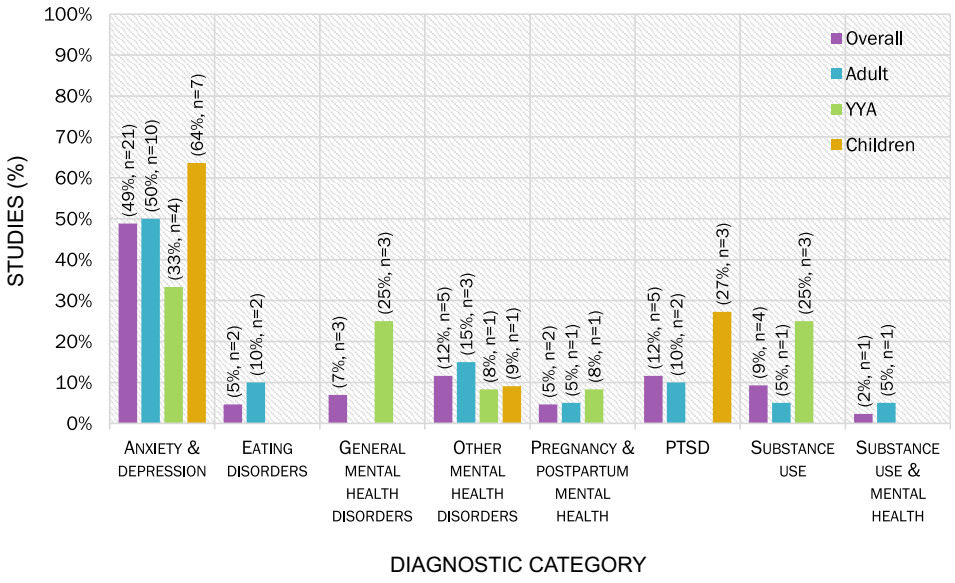

FIGURE 5 Proportion of studies by diagnostic category (Overall $n = 43$; Adult $n = 20$; youth and young adult [YYA] $n = 12$, Children $n = 11$). Other mental disorders including obsessive–compulsive disorder, borderline personality disorder, trichotillomania, and adjustment disorders. Note that two studies categorized under post-traumatic stress disorder (PTSD) looked at PTSD and comorbid depression diagnosed following military service or post-injury, respectively (Engel et al., 2014; Ridings et al., 2019)

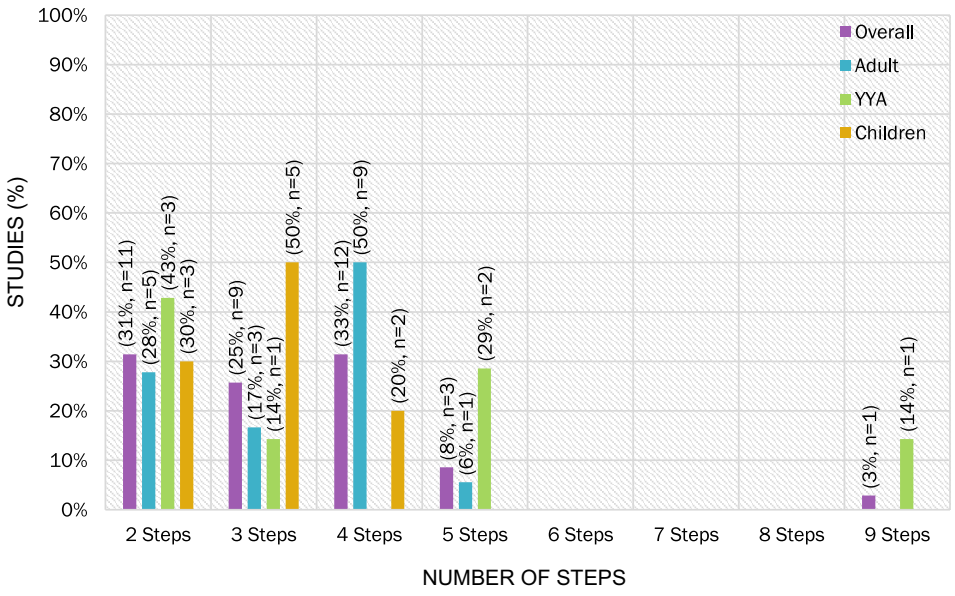

FIGURE 6 Proportion of studies by number of steps (overall $n = 35$; adult $n = 18$; youth and young adult [YYA] $n = 7$; children $n = 10$)

et al., 2019), and a review ($n = 1$) (van Straten et al., 2015). These studies did not explicitly define the number of steps in their model of care, but described other components that identified their treatment approach as a SCM. For example, the protocol by Courtney et al. (2019) described a unique 'integrated care pathway' model, which informed clinical choices throughout a client's care based on pre-set measures such as structured monitoring of symptoms and the client/family's willingness. The integrated care pathway included a psychotherapy-oriented stream and a medication stream that can be accessed independently or simultaneously, depending on the client's symptom severity, response to treatment, and willingness. Within each stream, different treatment modalities of varying intensity were offered based on the client's needs. Ultimately, however, the configuration of this model made it challenging to assign discrete steps and describe treatment modality by step, so it was excluded from our analysis of the number of steps, treatment type, and treatment intensity. The literature by Cross, Hickie and colleagues (2017, 2019) described how stepped care can be layered onto clinical staging models, and suggested potential treatment options for each clinical stage. Since clinical staging was not the focus of our review, this model was also excluded from analysis of the number of steps, triage, treatment type, treatment intensity, and criteria for step decisions.

We found substantial variation in the number of steps among similar diagnostic categories and age groups. For example, Pettit et al. (2017) used a two-step approach in their open trial investigating stepped care treatment for children and adolescents with anxiety disorders. In Step 1, participants received a low intensity computer administered attention bias modification protocol. Participants and their parents were then given the option not to continue with treatment or 'step up' to a second-tier cognitive behavioural therapy protocol (Step 2). In contrast, Kendall et al.' (2016) theoretical SCM for YYAs with anxiety proposed a five-step approach. The model

described low-intensity to high-intensity evidence-based treatments with the increasing steps, including: regular monitoring of symptom severity and treatment adherence; self-help efforts; internet-and computer-based interventions; parent training books; various forms of individual and family cognitive behavioural therapy; pharmacotherapy; and intensive programs.

3.3.2 | Triage and treatment type

Most studies (79%, $n = 34$) described their assessment and triage into the SCM, but not all. Seventy-nine percent ($n = 27$) of these studies started all participants at Step 1 with the lowest intensity treatments (a 'progressive' approach) while 18% ($n = 6$) individualized the treatment by matching the intensity of treatment to the participant's need (a 'stratified' approach) (Boyd et al., 2019). The progressive approach was consistently more common in comparison to the stratified approach across age categories. Salloum et al. (2014) utilized a progressive approach. They built their SCM with the goal of providing the least restrictive care (defined as minimizing the therapist and client's time and inconvenience) as the first step; therefore, all children who entered the SCM began with Step 1. In comparison, Seekles et al. (2009) decided that clients with more severe disorders should be referred to more specialized mental health care and/or pharmacotherapy directly and skip the preceding steps, which is consistent with a stratified approach. One model could not be categorized as either a progressive or stratified approach (Cornish et al., 2017). Cornish et al. (2017) describe a blended open progressive model that directs clients to a low intensity care option that meets their needs and readiness. In practice, the authors (2017) described that care providers worked collaboratively with clients to create a shared plan, which included a step assignment after an initial consultation. The initial consultation (considered to be part of Step 1) included assessment of suicidal risk, wellbeing, symptom severity, life functioning using the Behavioural Health Measure (BHM-20/43) as well as informed consent on stepped care treatment model. Nineteen percent ($n = 8$) of the 43 grouped studies did not specify how clients were or should be assigned in the SCM.

Detailed descriptions of the SCMs, as well as the therapies included in each of the steps, were found in 81% ($n = 35$) of the studies (see Table S1 for the full list of studies). Three of the studies described theoretical SCMs (Domhardt & Baumeister, 2018; Kendall et al., 2016; Ollendick et al., 2018). The type of treatment provided within the SCM was predominantly determined by the mental health disorder addressed and specific considerations related to the population of focus, while the intensity of treatments largely depended on resource availability and intervention structure. For example, while medication was a common component of high-level interventions in some SCMs, Salloum et al.' (2014) proposed SCM program for the treatment of childhood PTSD purposefully excluded pharmacotherapy due to concerns about the acceptability of medication use in the young children in their study. Some examples of therapies offered in each step can be seen in Table S2.

In the lower steps of SCMs, treatments were usually self-help-based to promote cost-and resource-saving, and were described as reducing the need for more resource-intensive clinician-directed therapy. Treatments commonly included 'watchful waiting,' bibliotherapy, psychoeducation, manualized cognitive behavioural therapy/ computer assisted self-help, and resources and/or information. Computer-based and/or telephone-based therapies were commonly used as an accessible platform for providing care. We observed considerable variability in the treatment types in the lower steps. In later stages of stepped care where treatment was required to alleviate moderate to severe symptoms, pharmacotherapy and individually tailored in-person therapies, such as one-on-one or face-to-face cognitive behavioural therapies, were frequently used. Of the studies that specified their SCM ($n = 35$), more than half (57%, $n = 20$) incorporated some form of cognitive behavioural therapy and 80% ($n = 15$) of those studies included cognitive behavioural therapies administered by a clinician typically at a later stage of treatment. Stepped care programs that included more than four steps typically included referral to specialists and/or intensive programs or tertiary care.

3.3.3 | Treatment intensity

In total, we identified six categories of treatment intensity, which we termed (in order of increasing intensity): Watchful Waiting, Self-help, Clinician-guided Self-help, Brief Interventions, Individualized Therapies, Specialist & Inpatient Services (see Table S1 for the full list of treatment types included in each category of treatment intensity). Note that some of the individualized therapies may also have been provided by specialists or inpatient services; however, Specialist & Inpatient Services were differentiated by whether the therapy necessitated referral and/or treatment outside of the SCM. Treatments categorized as Watchful Waiting, Self-help, and Clinician-guided Self-help were considered low intensity. Brief Interventions and Individualized Therapies were considered mild to moderate intensity. Treatments categorized as Specialist & Inpatient Services were considered high intensity.

For most studies, the intensity of the treatment appeared to increase with each step (see Figure S2). In one study that did not increase intensity with each step, the SCM allowed for additional therapy sessions with each step (Kay-Lambkin et al., 2010). In the other study that did not increase intensity with each step, Steps 1–4 included similar higher intensity treatments while Step 5 included a lower intensity intervention (Gjerdingen et al., 2009).[1] Programs with only two steps were structured to deliver lower intensity therapies at the initial step, with the second step involving a trained clinician and increased frequency and/or intensity of the therapy delivered in the first step. For example, cognitive behavioural therapy was often delivered at both low and high steps in some studies, with varying frequency and intensity of treatment. In contrast, SCMs with five or more steps demonstrated less consistency with treatment intensity and level of step. Some models also included aspects of case management, such as assessment, follow up and quality assessment as a step. In fact, case assessment was frequently included as the preliminarily

access point to stepped care across all types of SCMs and seven studies explicitly included it in their first step. The inclusion of case management in steps appeared to increase in models with more steps. We also observed that the details provided about the types of therapy included in the SCMs were inconsistent among the papers reviewed. For example, some studies described the therapy as 'self-help', while some described the specific modality of therapy, for example, parent-led therapist-assisted cognitive behavioural therapy treatment. This made assessment of therapy intensity and comparison within and among models challenging.

3.3.4 | Criteria for step decisions

Of the studies that described their criteria for step decisions ($n = 36$), 83% ($n = 30$) adjusted treatment intensity based on validated clinical measures of client symptoms administered by care providers. Some common examples of clinical measures included the Patient Health Questionnaire Depression Scale (PHQ-9) (Spitzer et al., 1999), Generalized Anxiety Disorder Scale (GAD-7) (Spitzer et al., 2006), the Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM) (Barkham et al., 1998; Evans et al., 2000), Spence Children's Anxiety Scale (SCAS) (Spence, 1998) and parent version (SCAS-P) (Nauta et al., 2004), and Paediatric Anxiety Rating Scale (PARS) (Research Units on Pediatric Psychopharmacology Anxiety Study Group, 2002). Of note, very few studies reported on their criteria for 'stepping down' and mainly described the necessary conditions for 'stepping up' or maintaining care. There was very little consensus about when a participant should be stepped up to a higher level of care; assessments of the participants were made at varied intervals and check-ins were part of the study protocol rather than part of a treatment plan. Participants displaying higher levels of symptom severity tended to be reassessed more times, as participants whose symptoms improved (or were eliminated) tended to exit the SCM per protocol. Resources such as medication or interpersonal psychotherapy were typically reserved only for participants experiencing moderate or severe mental health symptoms.

Seventeen percent ($n = 6$) of studies that described their criteria for step decisions integrated an element of client choice or preference. Most of these studies characterized the decision-making as a collaborative process between clinician and client that included elements of clinical judgement and client choice or preference. In the studies that focused on the child and YYA populations, the participants' families were typically provided with information regarding the diagnostic and functional status of the client following each step. These results enabled them to make an informed decision with the therapist about whether to step up to a higher intensity treatment, step down to a lower intensity treatment, or discontinue treatment (Courtney et al., 2019; Pettit et al., 2017; Rapee et al., 2017). In the studies that focused on the adult population, participants either self-selected to engage with the next step of treatment (Rogers et al., 2014) or stepped-up based on a combination of client preference, clinician impression, and continued presence of specific symptoms (Kay-Lambkin et al., 2010). There was no clear guidance from the reviewed literature in regards to how disagreements on step decisions between client and service provider should be addressed.

3.3.5 | Professionals involved in provision of stepped care

For lower intensity treatments commonly found at the lower steps, stepped care interventions were often delivered through self- or parent-administered therapies and computer-based interventions, as well as by therapists, general practitioners, or peer counsellors. At higher steps, higher-intensity treatments involved in-person therapies with specialists, psychologists or others identified as 'experienced' therapists. Generally, clinicians' qualifications increased with each step. Among the studies investigating stepped care in the community setting, including ones in Haiti (Verdeli et al., 2016), Nigeria (Adewuya et al., 2019), and one looking at underserved populations in the United States (Barnett et al., 2018), the clinicians providing care were community health workers and lay counsellors. Context of therapy and clinician and/or researcher assessments of 'appropriateness' determined the type of professional engaged in stepped care, though this was not stated explicitly in most studies.

3.3.6 | Duration of treatment and setting

Overall, the duration of the stepped care intervention ranged from 4 to 69 weeks. The mean duration was 26.2 weeks with a SD of 18.4 weeks. For YYAs, the average mean duration was 11.5 weeks, which was considerably lower than the average mean duration of the child and adult-focused studies of 25.7 and 31.3 weeks, respectively. However, the median mean duration of the child-focused (16.0 weeks) and adult-focused studies (25.0 weeks) were both lower than their average mean duration, suggesting that the distribution was skewed by outliers. Note that, in some cases, it was difficult to separate the duration of the stepped care intervention from the duration of the study's follow-up procedures. Therefore, the assessment of duration might be more reflective of the study timeline than the duration of the stepped care intervention.

Eighty-four percent ($n = 36$) specified the setting of their stepped care intervention (see Figure 7). Over one-third (36%, $n = 13$) of these studies examined SCMs within primary care or family practice clinics. This included three studies that used data collected from the Improving Access to Psychological Therapies (IAPT) programme (www.iapt.nhs.uk) in England (Clark et al., 2009; Delgadillo et al., 2017; Kellett et al., 2016), in which the organizational structure of the programme was built on a SCM. The most common setting for implementation of the SCMs for the YYA-focused studies was the school, university or college health settings ($n = 4$); one study took place in a high school counselling office (Douleh, 2013). Of note, none of the SCMs assessed in the review identified themselves as being implemented in the context of an interdisciplinary health care service such as a primary care home.

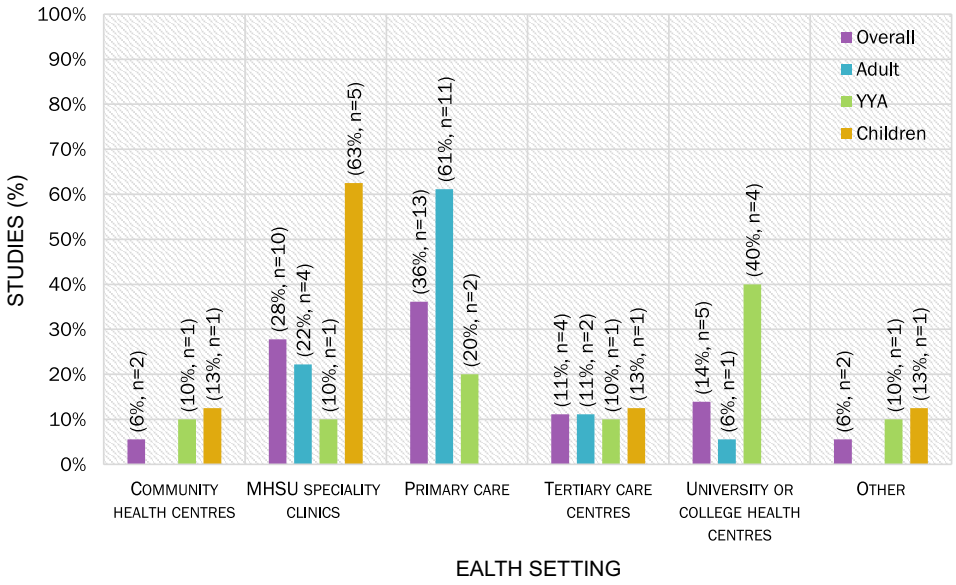

FIGURE 7 Proportion of studies by health setting (overall $n = 36$; adult $n = 18$; youth and young adult [YYA] $n = 10$; children $n = 8$). Other settings included a study with multiple settings and a specialized mental health care organization

3.3.7 | Care as usual

Among the 21 experimental studies examined in our scoping review, including both randomized controlled trials and variations of randomized controlled trials, 20 included and defined a control condition. One non-randomized clinical trial did not include a control condition (van der Leeden et al., 2011). Overall, there was considerable variability in the types of control conditions provided for the participants. The two most common control conditions were 'care as usual' (25%; $n = 5$) and 'enhanced care as usual' (25%, $n = 5$). In the care as usual condition, participants were offered the typical treatment regimen provided by the care provider and/ or centre. Alternatively, participants were instructed to seek the typical treatment from the family physician who provided referrals to specialists if and when necessary. In countries such as the Netherlands where primary care is relatively easy to access, problems navigating care were not identified as a source of concern, as visits with the family physician were relatively comprehensive (Seekles et al., 2011). However, in other settings, 'care as usual' may have in fact been no care at all, as no follow up data with family physicians was provided for the control conditions. In the studies that offered 'enhanced' care as usual, study personnel were actively involved in connecting the control participants to treatment, for example, via referrals to specialists or family physicians, or 'check-ins' to maintain adherence to the control therapy.

Twenty percent ($n = 4$) of studies used a control condition that was the same as the higher intensity treatments provided in the stepped care intervention. For example, Salloum et al. (2017) used a two-step SCM in which participants received three sessions of parent-led therapist-assisted cognitive behavioural therapy treatment in Step 1 and 12 weekly therapist-led sessions of trauma-focused cognitive behavioural therapy in Step 2. The control group received the therapeutic regimen of Step 2, that is, 12 weekly therapist-led sessions of trauma-focused cognitive behavioural therapy. Ten percent ($n = 2$) of studies provided an assessment-only control condition where the participants randomized to the control condition only received the initial assessment (Borsari et al., 2007, 2012). The remaining 20% ($n = 4$) of studies either employed a waitlist control condition ($n = 1$) (Rogers et al., 2014); offered resources and information for the control participants ($n = 1$) (Bischof et al., 2008; Reinhardt et al., 2008); randomized the clients to therapy type in Step 2 ($n = 1$) (Jensen et al., 2020; Thomsen et al., 2013); or included a theoretical control group based on the typical client accessing care through a therapist ($n = 1$) (Pettit et al., 2017).

As there were a limited number of experimental trials that focused specifically on YYA, it was difficult to draw specific conclusions about the control conditions present in these studies. The limited evidence indicated that none of the child- or YYA-focused experimental studies used the typical 'care as usual' control condition (note that the YYA-oriented study protocol by Courtney et al. (2019) proposed a 'care as usual' control condition for a trial). Instead, the child- or YYA-focused experimental studies used an assessment only condition ($n = 2$), enhanced care as usual ($n = 1$), a control condition that matched the higher intensity treatment ($n = 2$), randomized treatment modality in step 2 ($n = 1$), or a theoretical control condition ($n = 1$). In comparison, 38% ($n = 5$) of the adult-focused experimental studies used a care as usual control condition with the remaining eight studies distributed among enhanced care as usual ($n = 4$), control condition that matched the higher intensity treatment ($n = 2$), provision of resources ($n = 1$), and a waitlist control condition ($n = 1$).

3.4 | Special considerations and recommendations for YYAs

Among the studies that focused specifically on providing treatment for the YYA population, the main recommendations for youth specific SCMs included:

a. integrating parents, family, and the community in the stepped care treatment approach (Kendall et al., 2016; Salloum et al., 2014; Silverman et al., 2016; van der Leeden et al., 2011);
b. ensuring that the stepped care approach is sufficiently individualized for the target YYA population, for example, identifying which youth would most benefit from a step up in treatment intensity (Borsari et al., 2016; Pettit et al., 2017), and considering comorbidities, accommodating for youth from minority populations and/or those from disadvantaged neighbourhoods/backgrounds (Kendall et al., 2016).
c. Targeting stepped care and treatments for specific age groups was a major point in the discussions (Birleson & Vance, 2008). In fact, one study by Delgadillo et al. (2017) found that age was significantly correlated, although the association was weak, with a reduction in anxiety and depression with a reduction of 0.01 score points for the validated measures per year increase in age.
d. Future research should consider sustainability and cost-effectiveness (Rapee et al., 2017).

Other recommendations included suggestions for therapies to use for specific diagnoses and for specific steps. For example, Mufson et al. (2017) recommended that a 'warm assessment and psychoeducation' step might be sufficient for those adolescents with a mild and transient form of depression. In addition, one of the studies focused on treating eating disorders in the college setting concluded with a call to preventative action in the student population (Bauer et al., 2009).

4 | DISCUSSION

We identified 51 unique papers and 43 grouped studies on SCMs for YYAs between ages 12 and 24 with MHSU disorders. However, our examination of the literature revealed that the current body of evidence is primarily oriented toward the adult population (i.e., those 18 and over), and most studies do not stratify reported results by age. SCMs for participants within our defined age range were identified across a wide range of MHSU services offering care for children, YYA, and adults. In addition, most studies did not specify interventions specific to YYAs, which is a major priority in current mental health service development. The small sample of YYA-specific studies we identified primarily consisted of reviews and commentaries, with few experimental studies. We note that few studies of stepped care interventions for substance use and disordered eating among young people were returned using our search strategies. This is remarkable given these concerns are common in among young people in this age range and suggests that the literature is not reflective of the service landscape for young people in these areas. Furthermore, our findings consistently indicated that there is a need to define the core components needed for 'SCM' for MHSU for YYAs as none were evident. In light of this, conclusions drawn regarding the effectiveness of SCMs from the current body of literature may not be generalizable to YYAs, or to organizations that provide integrated services for adolescents and young adults in a single setting.

Among the models which described themselves as 'stepped care,' we found substantial variability in almost every aspect of the SCM assessed, including: step assignment, number of steps, treatment type and intensity, administrators/professionals involved, implementation setting, and the criteria for stepping up or down. The number of steps included in the literature on SCMs ranged from two to nine, and there appeared to be more heterogeneity in the number of steps in the YYA-focused literature. Overall, there was less agreement in terms of therapy types in the lower steps of the SCMs, as the lower steps typically reflect the more novel and prevention-oriented aspects of SCMs being studied; in contrast, the higher intensity steps are mainly comprised of treatments delivered in a manner common to most contemporary health systems (which tend to be driven by specialist-clinician-directed individual therapies). This finding was also reflected by some of the control conditions used in the experimental studies, in which the control groups were given only the higher intensity steps of SCM intervention. Additionally, it is difficult to separate what benefits might be derived from the SCM itself, rather than the specific interventions provided within the SCM, because the SCMs exhibited substantial diversity within and among diagnostic categories (Kendall et al., 2016).

Despite the absence of a standard SCM applied to YYAs experiencing MHSU disorders, there were some visible trends across studies. We observed that most studies utilized a progressive approach to assessment and triage into the SCM rather than a stratified approach. While it is possible that this finding is related to our search strategy or the culture of care in the settings where the SCMs were implemented, it is not clear to us why there is such a preference in the literature. Greater clarity is needed as to whether a stratified or progressive approach is warranted YYA MHSU services. In the adult literature, Boyd et al. (2019) found that clients with common mental health problems were 1.5 times more likely to recover in a SCM that used a progressive approach in comparison to a stratified one. They suggested that the progressive approach was potentially more efficient and potentially more cost effective as it ensured that only those that need high intensity treatment are stepped up (Boyd et al., 2019).

Once the client was admitted into the model, we found that the main categories of treatments provided in SCMs for MHSU could be characterized as variations of: (a) Watchful Waiting; (b) Self-help (i.e., web-based interventions and guidebooks), (c) Clinician-guided Self-help, (d) Brief Interventions (lower intensity treatments, less than six sessions), (e) Individualized Therapies (higher intensity treatments, six or more sessions), and (f) Specialist & Inpatient Services. In general, treatment intensity, as defined in this paper, increased with each step. Although therapy types varied, watchful waiting was commonly practiced as the first step and treatment with medication was often offered at higher steps, while cognitive behavioural therapy was frequently administered between low and high intensities at varied step levels. The context of therapy (or setting) and appropriateness determined the type of professional engaged in each step of care, though this was not made explicit in most studies. Consistently, clinician

qualifications increased with the intensity of services (Rapee et al., 2017). In addition, 'stepping up' or 'stepping down' was primarily based on monitoring conducted by service providers using standardized questionnaires. We did find some suggestions for tailoring interventions to the specific needs of YYA, including: involving parents, YYA themselves, and the broader community in decision-making related to the treatment approach; tailoring the treatment approach; and considering sustainability and cost-effectiveness in the SCM implementation. Our results also indicated that studies examining SCMs focused on delivering services for YYA in the appropriate setting, such as offering accessible services to school aged YYA in school, university or college settings. However, this begs the question as to whether these models are adequately capturing the experience of YYA who are not attending school (many of whom may be out of school for reasons related to a MHSU problem) and, therefore, likely unable to access care in school-based settings.

Our study has several limitations. First, as previously stated, there were a limited amount of studies focusing on providing services for YYA within our defined age range. As such, we expanded our inclusion criteria to encompass all studies that offered services to participants between the ages of 12 and 24. Second, the stepped care interventions studied varied substantially, as did the samples included in the studies (countries, setting of interventions, etc.). Third, the amount of detail provided in the studies regarding the type of therapies provided and the content of these therapies was variable and, in some cases, quite limited. This made comparisons within and between SCMs quite challenging, especially regarding treatment intensity across models. As a result, it is possible some dimensions of specific interventions may have been missed or not accounted for in our analysis due to lack of detail provided in the articles. Future studies should be more specific in describing the therapies used in their SCMs; this is particularly important for research on SCMs as the type and intensity of therapy provided at each step is a core aspect of the service delivery approach. In addition, future research might examine how treatment intensity varies in different types of SCMs with different numbers of steps, which was out of scope for this review.

The main strength of our scoping review is that it is the first (that we are aware of) to comprehensively describe the available evidence with respect to SCMs for YYA with MHSU conditions, which is an emerging approach to service delivery for MHSU for this population. Overall, it highlights the considerable variability and lack of consistent definition in the current stepped care literature on MHSU services for YYAs. Indeed, one of the main challenges identified by our review is the lack of conceptual clarity on what a 'SCM' actually is. This suggests that 'stepped care' has become an increasingly popular *buzzword* encompassing innovative models of MHSU service planning in the YYA literature, but without sufficient standards or commonalities in definition or operationalization. This makes it difficult to draw substantive, practice-oriented conclusions from the literature, as there are few opportunities to compare alike SCMs. However, buzzwords also have the power to raise the profile of matters of emerging concern, and play an important role in building consensus around a topic from multiple perspectives (Bensaude Vincent, 2014). Indeed, much of the literature that we found examined the effectiveness of a single therapeutic approach and recommended that the approach be incorporated as a step in future SCMs, indicating that stepped care—although still in its early stages—particularly for YYAs—is seen as a preferred direction for the future of MHSU services.

5 | IMPLEMENTATION AND THE FUTURE OF SCMS FOR YYAS

Given SCMs prominence as an emerging practice in efforts to transform YYA MHSU services (Birchwood & Singh, 2013; Douleh, 2013; Henderson et al., 2017; Hetrick et al., 2017; Illback & Bates, 2011; Malla et al., 2016; McGorry et al., 2013; McGorry & Goldstone, 2016; Rao et al., 2013; Verma et al., 2012), ensuring a fulsome consideration of factors critical to implementation is as important as a consideration of treatment effectiveness. Notably, the studies in this review largely lacked discussion of SCM implementation factors, such as the establishment and application of consistent definitions and operational criteria, concurrent assessment of organizational readiness and capacity, fit with existing clinician practices and organization policies, and fidelity monitoring (Aarons et al., 2011; Damschroder et al., 2009). These gaps present significant challenges as resource-strapped systems strive to invest for optimal returns, which are contingent on effective SCM implementation leading to expected positive outcomes. Nevertheless, the current landscape also provides opportunity. Many leading YYA MHSU service initiatives include standardization of practices and process, are supported by 'backbone' infrastructures with implementation expertise, and emphasize ongoing outcome monitoring (Birchwood & Singh, 2013; Halsall et al., 2019; Hetrick et al., 2017; McGorry et al., 2013). These features can provide an optimal environment for evaluating SCMs. Moreover, the current state of SCMs provides an imperative for YYA MHSU service initiatives to work collaboratively to address these critical issues.

6 | CONCLUSION

Despite the growing popularity of SCMs for the treatment of MHSU conditions in YYAs in practice, our scoping review revealed that there is a relative paucity of literature comprehensively examining SCMs for YYAs who experience MHSU disorders. The current SCMs aimed at alleviating the MHSU symptoms of YYAs are considerably varied (e.g., professionals involved, number of steps, criteria to step-up), and studies generally focus on adult populations. Considering the available body of evidence, we recommend that the community attempt to establish explicit definitions and/or shared understandings of the parameters and boundaries of 'SCMs' for YYAs with MHSU disorders. This will be an important first step toward providing effective, efficient, and acceptable stepped care, which also address the context-specific concerns of different YYA populations.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

ENDNOTE

[1] These studies still met our inclusion criteria because the participants were systematically evaluated using defined improvement criteria and their care was adjusted or augmented when they did not improve sufficiently.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

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