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Understanding resilience among transition-age youth with serious mental illness: Protocol for a scoping review

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Understanding resilience among transition-age youth with serious mental illness: Protocol

for a scoping review

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1 **Understanding resilience among transition-age youth with serious mental illness: Protocol**

2 **for a scoping review**

3 **Abstract**

4 **Introduction:** Transition-age youth (16-29 years old) are disproportionately affected by the

5 onset, impact and burden of serious mental illness (SMI; e.g., depression, bipolar disorder,

6 schizophrenia spectrum disorders). Emerging evidence has increasingly highlighted the concept

7 of resilience in mental health promotion and treatment approaches for this population. A

8 comprehensive synthesis of existing evidence is needed to enhance conceptual clarity in this

9 area, identify knowledge gaps, and inform future research and practice. As such, the present

10 scoping review is guided by the following questions: How has resilience been conceptualized

11 and operationalized in the transition-age youth mental health literature? What factors influence

12 resilience among transition-age youth with SMI, and what outcomes have been studied within

13 the context of transition-age youth's mental health recovery?

14 **Methods and analysis:** The present protocol will follow six key stages, in accordance with

15 Arksey and O'Malley's (2005) established scoping review methodology and recent iterations of

16 this framework, and has been registered with (details removed for anonymous peer review). The

17 protocol and review process will be carried out by a multidisciplinary team in consultation with

18 community stakeholders. A comprehensive search strategy will be conducted across multiple

19 electronic databases to identify relevant empirical literature. Included sources will address the

20 population of transition-age youth (16-29 years) diagnosed with SMI, the concept of resilience

21 (in any context), and will report original research written in English. Data screening and

22 extraction will be completed by at least two independent reviewers. Following meta-narrative

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1 review and qualitative content analyses, findings will be synthesized as a descriptive overview

2 with tabular and graphical summaries.

3 **Ethics and dissemination:** Institutional research ethics board approval will be obtained prior to

4 completing the community stakeholder reaction meeting (consultation stage of this review).

5 Results will be disseminated through conference presentations, publications, and user-friendly

6 reports and graphics.

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8 **Strengths and limitations of this study**

9 • This scoping review study will map various conceptualizations of resilience within the

10 transition-age youth mental health literature, which may improve conceptual clarity as

11 well as guide future research, theory, and interventions.

12 • Variability in how the population (transition-age youth) and concept (resilience) have

13 been defined, as well as restrictions to the search strategy based on language, date, and

14 publication type may limit the breadth of the search.

15 • An assessment of the methodological quality of included studies will not be conducted

16 which limits the types of conclusions and implications that can be drawn from the review.

17 • We will apply an iterative and team-based approach, in consultation with community

18 stakeholders (transition-age youth with SMI, clinicians, researchers) to improve the

19 applicability and dissemination of results.

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1   **Introduction**

2   Transition-age youth (16-29 years old) are the highest risk age group for onset of serious

3   mental illness (SMI; mental illnesses that cause substantial functional impairment, e.g.,

4   depression, bipolar disorder, schizophrenia spectrum disorders), the single most disabling group

5   of disorders worldwide (1,2). The experience of mental illness for young people is unique, in that

6   it arises during a critical period of psychosocial development, identity formation, and many

7   complex life transitions (3,4). Access to supportive treatment and relationships, social

8   marginalization, and stigma continue to influence the course and severity of mental illness for

9   transition-age youth (5). Indeed, SMI can negatively impact one's overall physical health, quality

10   of life, and engagement in meaningful life roles and activities, including academics,

11   employment, and social relationships (1,4,6,7). Further, the experience of chronic and persistent

12   symptoms of mental illness can contribute to suicide risk, which is the second leading cause of

13   death among individuals 15-29 years old globally (8,9). Despite the increased risk and burden of

14   SMI among transition-age youth, this age group faces many barriers in accessing service and

15   supports, as they transition out of youth services and into the adult mental health and addiction

16   services sector (10,11). As such, the identification of factors that contribute to transition-age

17   youth's mental health recovery and early intervention are now recognized as priority areas within

18   national and global mental health strategies and guidelines (11–14).

19   Of particular interest, researchers and clinicians have emphasized the importance of

20   promoting *resilience* in transition-age youth's mental health recovery. Most definitions of

21   resilience refer to positive adaptation in the face of significant adversity as a central or defining

22   feature. However, there are many different ways of conceptualizing resilience (e.g., as a trait,

23   outcome, or dynamic process) (15,16), which has led to some ambiguity in how resilience is

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1   defined and understood across different research disciplines and perspectives (17,18). For

2   example, many authors have conceptualized and discussed resilience as an outcome resulting

3   from changes made at the individual level, or in relation to positive personal attributes (e.g.,

4   hope, self-efficacy, coping) (19,20). This aligns with early definitions of resilience as an

5   exceptional personal quality or trait, that an individual either has or does not have, which will

6   determine their capacity to both endure incredibly stressful life events and continue on a path

7   towards full functional and emotional recovery (15,21,22). Conceptualizations of resilience as a

8   personal trait or outcome have been criticized in recent research as this does not recognize the

9   critical role of one's environment and available resources (17,23).

10   In more contemporary and holistic conceptions, "resilience has come to be seen less in

11   terms of static characteristics within the individual and more as a dynamic and multi-faceted

12   family of processes that evolve over time" (p. 234) (24). To illustrate, resilience has been

13   conceptualized as a dynamic process, involving one's personal characteristics, environment, and

14   support networks, that influence how an individual "bounces back" from challenging

15   circumstances (e.g., onset of mental illness) (16–18,25). This also acknowledges the integral role

16   of not only the individual, but the social and ecological systems that influence resilience (26,27).

17   For example, Wathen and colleagues (2012) offer the following definition further contextualized

18   to the field of trauma and mental health: "Resilience is a dynamic process in which

19   psychological, social, environmental and biological factors interact to enable an individual at any

20   stage of life to develop, maintain, or regain their mental health despite exposure to adversity" (p.

21   10) (28). Through this lens, resilience is seen as fluid (rather than a fixed or pre-determined

22   trait), arising through multiple pathways that lead to positive indices of flourishing and

23   functioning (29). Taken together, processes of resilience are shaped by the complex interplay

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1   between individual experiences of stress / adversity, multimodal "*resilience factors*" (e.g., risks,

2   internal and external protective factors, self-regulatory strategies), as well as one's adaptation

3   and other resilience-related outcomes (25,30).

4   This process-oriented perspective of resilience has gained increased attention in mental

5   health and rehabilitation sciences research over the past two decades (19,29), and has aligned

6   with the paradigm shift towards recovery models of mental health and the growing popularity

7   and application of positive psychology principles in psychiatry (31). Indeed, resilience research

8   and recovery models of mental health share an orientation towards understanding the processes

9   that underly individual experiences (embedded within one's sociocultural context / environment)

10   and emphasize the importance of hope, meaning, engagement, and life satisfaction in one's

11   recovery (32–34). Recent conceptual models (35) and interventions (36,37) focused on youth-

12   specific and integrated mental health services also highlight resilience as an important aspect to

13   the recovery process. Additionally, adopting a resilience perspective aligns with more strengths-

14   based and transdiagnostic approaches which aim to better understand processes of recovery

15   relevant to a broader range of adolescent and young adult mental health service users (38).

16   Researchers have begun to uncover resilience factors across and beyond specific diagnoses,

17   which can be targeted in interventions to promote positive development, functioning, and well-

18   being (26,29,30,39). As such, the study of resilience among transition-age youth with SMI can

19   inform developments in recovery-oriented approaches to service delivery and warrants further

20   exploration.

21   In sum, emerging evidence and frameworks of resilience provide a unique lens to

22   understanding mental health among transition-age youth, with the capacity to recognize

23   individuals' strengths, and move beyond the common focus on illness, deficits and problems in

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1   rehabilitation sciences (35). However, researchers have not yet developed a theoretical

2   framework or model of resilience tailored to the unique experiences of transition-age youth who

3   are diagnosed with SMI to guide research and practice (19). In addition, conceptualizations of

4   resilience vary across the scientific literature, which directly impacts how the concept of

5   resilience is understood, operationalized and applied within this context. This is important to

6   address as discrepancies across definitions of resilience may limit measurement, study

7   comparisons, and current understandings of resiliency-informed care approaches in research and

8   clinical practice (23). A comprehensive synthesis of existing evidence will enhance conceptual

9   clarity in this area, identify factors and outcomes that are relevant to transition-age youth's

10   resilience, and inform future work.

11   **Objectives**

12   The overarching purpose of the present scoping review is to synthesize and describe the

13   breadth of scientific literature on resilience among transition-age youth diagnosed with SMI,

14   identify current knowledge gaps, and recommend key areas for future resilience research among

15   this population. Specifically, this scoping review will explore how the concept of resilience has

16   been conceptualized and operationalized in the transition-age youth mental health literature, and

17   identify resilience factors and outcomes that have been studied within the context of transition-

18   age youth's mental health recovery (e.g., adversity, risks, internal and external protective factors,

19   self-regulatory strategies, adaptation and resilience-related outcomes).

20   **Methods and Analysis**

21   A scoping review design was selected based on the exploratory nature of the proposed

22   research question and the current focus on clarifying the concept of resilience. Particularly, a

23   scoping review design allows for a comprehensive summary of knowledge, inclusive of more

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1 broad study objectives and methodologies, and is thus recommended for gaining conceptual

2 clarity and identifying key knowledge gaps (40,41).

3   The scoping review protocol will follow the methodological stages outlined by Arksey

4 and O'Malley (2005), and extended by Levac and colleagues (2010), including: i) identifying the

5 research question, ii) identifying relevant studies, iii) study selection, iv) charting the data, v)

6 collating, summarizing, and reporting the results, and vi) stakeholder consultation (42,43).

7 Throughout the review process, an iterative and reflexive approach will be used in order to refine

8 the initial protocol as needed in consultation with a community stakeholder group (involving

9 researchers, clinicians, and transition-age youth with SMI) (42,43). Recent guidance documents

10 (44) and best practices for conducting and reporting scoping reviews (PRISMA-ScR) (45) will

11 also be applied to promote methodological rigor and transparency. The PRISMA-P checklist (46)

12 can be found in Appendix A. The current protocol has been registered through (details removed

13 for anonymous peer review).

14 **Stage 1: Identifying the Research Question**

15   This scoping review aims to explore the following research questions: (1) What is the

16 extent and breadth of the current scientific literature on resilience among transition-age youth

17 diagnosed with SMI? (2) How has resilience been conceptualized and operationalized (i.e.,

18 defined and measured) in the transition-age youth mental health literature? (3) What factors

19 influence resilience among transition-age youth with SMI, and what outcomes have been studied

20 within the context of transition-age youth's mental health recovery? The research questions have

21 been broadly framed using the PCC mnemonic to address the *population* of transition-age youth

22 diagnosed with SMI and the *concept* of resilience within any *context* of one's mental health

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1   recovery (41). Each component is further clarified below, in accordance with the Joanna Briggs

2   Institute scoping review manual (44).

3   *Population*. For the present review, the population is defined as "transition-age youth",

4   including adolescents and young adults between the ages of 16 and 29 years old, who are

5   entering adulthood and have been diagnosed with SMI. It is important to note that definitions of

6   "youth", "adolescents", and "young adults" differ across various cultures and settings, and are

7   thus highly mixed within the scholarly literature. In order to be inclusive of the most common

8   European/United Nations/WHO definitions of this age group and reflective of current mental

9   health service models, the present review will include studies with participants spanning middle

10   adolescence (age 15) to the "upper limit" of young adulthood (age 36) if the target population is

11   clearly defined as "transition-age youth" (3,14,47–50). Additionally, serious mental illness

12   (SMI) is defined as "a mental, behavioral, or emotional disorder resulting in serious functional

13   impairment, which substantially interferes with or limits one or more major life activities", such

14   as one's interpersonal relationships, self-care, employment, or recreation (51,52). Definitions of

15   SMI exclude dementias, developmental disorders, and substance use disorders, as well as mental

16   disorders due to a general medical condition (52). Examples of mental health conditions that may

17   meet criteria for SMI include: major depressive disorders, bipolar disorders, borderline

18   personality disorder, anxiety disorders, eating disorders and schizophrenia spectrum disorders

19   (51,52). Among youth and adolescents (under age 18) the same definition and examples are

20   applied but also occasionally termed "serious emotional disturbance" (SED), rather than SMI

21   (52,53). Studies with participants experiencing co-morbid disorders which are not the primary

22   focus will also be included in this scoping review.

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1   *Concept.* While definitions of resilience vary across different research disciplines, most

2 definitions refer to positive adaptation in the face of significant challenge, risk or adversity as

3 central or defining features, and acknowledge the importance of sociocultural factors in shaping

4 experiences and understandings of resilience (19). For the purpose of this scoping review,

5 resilience is defined as a dynamic process that unfolds over time, involving multiple resilience

6 factors that interact to enable individuals to negotiate or recover from stressful life events /

7 adversity (e.g., one's personal characteristics, environment and support networks). Studies that

8 adopt this process-oriented perspective will be included, and the following core elements of

9 resilience and resilience factors will be explored: adversity, risks, internal and external protective

10 factors, self-regulatory strategies, adaptation and resilience-related outcomes (25,30). Studies

11 that focus solely on a trait perspective of resilience, similar constructs (e.g., ego-resilience,

12 psychological capital) or biological / genetic / neurophysiological factors will be omitted. Lastly,

13 given our focus on psychological resilience at the person- or individual-level, studies evaluating

14 family- or community-level resilience will not be included.

15   *Context.* While "clinical recovery" is often defined as a reduction in SMI symptoms or

16 impairment (typically in clinical / health care settings), "personal recovery" refers to the

17 processes that contribute to transition-age youth's hope, development, and engagement in

18 meaningful activities (even while facing SMI) and emphasizes the importance of multiple

19 contexts where this occurs (e.g., spanning personal, familial, social and institutional

20 environments) (35). The present review considers mental health recovery primarily through a

21 personal recovery lens, and will thus explore transition-age youth's resilience in any context of

22 their mental health recovery, which may include individual, community, and health-oriented

23 settings (among others).

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1 **Stage 2: Identifying Relevant Literature**

2   *Information source.* To comprehensively review the existing evidence and knowledge

3 base related to resilience in the field of transition-age youth mental health, empirical sources will

4 be considered, including original research / primary studies. Specifically, six electronic databases

5 of value to the fields of psychology, health and rehabilitation sciences will be searched to

6 identify relevant empirical studies: MEDLINE (Ovid), EMBASE (Ovid), PsycINFO, AMED,

7 CINAHL, and Scopus. To enhance the comprehensiveness of the search, relevant journals and

8 the reference list of included sources will be manually / hand-searched.

9   *Search strategy.* The search terms and search strategy will be developed by the

10 multidisciplinary review team, in consultation with a health sciences librarian at (details removed

11 for anonymous peer review). Importantly, keywords have been carefully selected to best capture

12 the complex and evolving terminology used to describe the population and concept reflected in

13 our research question. As mentioned, terms to describe the age group of transition-age youth are

14 highly variable and inconsistent within the literature (e.g., subject headings / keywords may be

15 inclusive of youth / teenagers / adolescents / emerging adults / adults etc.). Clinical and lay

16 language to describe SMI diagnoses have also evolved over time, with "severe and persistent

17 mental illness" and "chronic mental illness" often cited (52). Further, as reflected in the research

18 aims, there is currently no consensus on the definition of resilience and conceptualizations differ

19 based on the context or academic discipline applied (19). To overcome these challenges in the

20 development and execution of our search, we will utilize the following techniques: i) a multi-step

21 search process to ensure relevant sources are not missed (an initial limited search strategy

22 favoring sensitivity over precision will be conducted first and inform potential revisions making

23 the search strategy more precise); ii) use of Yale MeSH analyzer for piloting; and iii) ongoing

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1   expert consultation. Additionally, the search strategy will undergo peer review to enhance its

2   feasibility and rigor (e.g., CADTH Peer Review Checklist for Search Strategies) (54).

3   The preliminary search strategy and list of keywords have been developed using

4   MEDLINE (Ovid) (see Appendix B) and will be adapted to each database once finalized. The

5   search strategy will explore specified search terms within subject headings, titles, abstracts and

6   keywords. Search terms will be combined using appropriate Boolean logic and operators (e.g.,

7   'and', 'or', 'not').

8   **Stage 3: Study Selection**

9   Study selection will follow a collaborative and iterative screening process among the

10   review team using Covidence systematic review software (55) and pre-determined eligibility

11   criteria (42,43). All search results will be exported to Covidence for data management and to

12   remove duplicates. At least two independent reviewers (authors AN and MD) will complete

13   screening in two stages for i) title/abstract and ii) full-text review. The reviewers will complete a

14   calibration exercise using a sample of 10 references to pilot inclusion / exclusion criteria and

15   compare decisions (e.g., include / exclude / uncertain). Formal title/abstract screening will

16   commence when 80% agreement is achieved and will involve regular meetings among reviewers

17   to discuss any challenges or uncertainties. Upon completion of stage 1, full-text references will

18   be obtained and independently screened by the same two reviewers. The same strategy will be

19   applied to stage 2 full-text screening, including piloting (calibration exercise for 10 references)

20   and regular discussion. At each stage, reviewer (inter-rater) agreement will be reported.

21   Disagreements will be resolved by consensus or by the decision of a third reviewer (senior

22   authors EN and CS).

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1   Included sources will address the population of transition-age youth diagnosed with SMI,

2   the concept of resilience (in any context), and will contain original peer reviewed research

3   written in English. Specific language restrictions were made for feasibility purposes.

4   Additionally, the publishing date was limited to the years 2000 to 2022 as this is the time period

5   where a significant rise in resilience research emerged within mental health and rehabilitation

6   sciences (19,29,56). The prioritisation, implementation and evaluation of mental health services

7   specifically tailored to transition-age youth (e.g., early intervention programs) also mainly took

8   root after the year 2000 (13,47,57). Further inclusion / exclusion criteria for the two-stage

9   screening are detailed below.

10   ***Eligibility for Stage 1 Title/Abstract Review:***

11   ***Inclusion criteria.*** a) Population: Refers to transition-age youth diagnosed or living with

12   SMI (as defined previously). b) Concept: Resilience / resiliency is identified as a key focus

13   within the purpose / objectives / research question, outcome measure, and/or findings. c)

14   Context: Is set in any individual, community or health-oriented context of mental health

15   recovery. d) Type of source: Peer reviewed original research (quantitative, qualitative, mixed

16   method). e) Publication language / date: Written in English and published between 2000 and

17   2022.

18   ***Exclusion criteria.*** a) Population: Refers to non-clinical population, general population,

19   children / youth (age 0-14), or childhood developmental disorder. b) Concept: Resilience /

20   resiliency is not an explicit focus. c) Type of source: Peer reviewed articles with the primary aim

21   of developing, reporting or validating the psychometric properties of survey measures /

22   instruments, study protocols, review articles (e.g., systematic/scoping reviews, meta-analyses),

23   books / book chapters, and grey literature (e.g., editorials, commentaries / reports, clinical

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1   guidelines, conference proceedings, and theses / dissertations). d) Publication language / date:

2   Written in another language than English and published before January 1, 2000.

3   *Eligibility for Stage 2 Full-text Review:*

4   *Inclusion criteria.* a) Population: Clearly defined clinical population in accordance with

5   either: participant self-reported history of SMI; clinician confirmed diagnosis of SMI; or DSM-V

6   / ICD-10 system diagnostic criteria. b) Concept: Must explicitly define / operationalize the

7   concept of resilience from a process-oriented perspective and focus on individual-level

8   resilience.

9   *Exclusion criteria.* a) Population: Mixed samples whereby transition-age youth with SMI

10   are encompassed within broader age groups or the general population (without the stratification

11   of results / reporting). b) Concept: Trait resilience, other psychological constructs that are similar

12   or connected to resilience / resiliency (e.g., psychological capital, hardiness, grit, general indices

13   of subjective well-being), family- or community-level resilience, or biological / genetic /

14   neurophysiological factors are identified as the sole / primary focus or outcome.

15   While criteria were developed to maintain a broad scope of selected studies, our hope is

16   that stringent inclusion / exclusion criteria will eliminate sources that only include the concept of

17   resilience as an opinion, recommendation, vague interpretation, or buzzword – as this will not

18   aid in enhancing conceptual clarity in this research area. As such, these broad eligibility criteria

19   may undergo further refinement to ensure that selected sources capture the full breadth of

20   knowledge available related to resilience among young people with SMI.

21   **Stage 4: Data Extraction**

22   Following recommended data charting methods (42,43), a standardized and systematic

23   charting form (Table 1) will be used to organize and interpret relevant details from the selected

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1   sources in line with our research question and objectives. The following information will be

2   charted in Excel: i) general document details, ii) key characteristics of empirical studies (e.g.,

3   research design, methods, intervention details, youth engagement, intersectional approaches,

4   study population, context), iii) how resilience was conceptualized and operationalized (e.g.,

5   definition, theoretical framework / model, academic discipline, measures), and iv) resilience

6   factors and outcomes identified.

7   The preliminary chart form was also developed in accordance with Greenhalgh and

8   colleagues' (2005) meta-narrative approach (58). Specifically, this meta-narrative approach was

9   originally created to detail how a field of study or key concept has evolved over time and to

10   explore potential tensions that exist across research traditions (or "paradigms") within

11   knowledge syntheses (58). A meta-narrative approach is recommended when examining

12   complex, heterogeneous bodies of literature where a key concept of interest has been

13   conceptualized and investigated through different research traditions, and conceptual clarity is

14   needed (58). According to Greenhalgh et al. (2005), a *research tradition* refers to a paradigm of

15   inquiry, undertaken by researchers, that shares four key interrelated dimensions (conceptual,

16   theoretical, methodological, instrumental), and thus shows distinct disciplinary roots, scope and

17   key concepts (58). Research traditions are often characterized and influenced by seminal

18   conceptual papers that inform the direction and focus of future work (58). Alternatively, an

19   *academic discipline* is defined as a broader field of study or branch of knowledge (e.g.,

20   sociology, psychology, medicine) (58).

21   Data extraction will be a collaborative and iterative process among the review team to

22   ensure that key characteristics, definitions, themes and strengths/limitations are captured. A

23   calibration exercise using a sample of 5 studies will be completed by two reviewers to pilot the

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1   chart form. When agreement of at least 80% is achieved, the two independent reviewers (authors

2   AN and MD) will complete the remaining formal data charting procedures for all references. The

3   charting form will be revised as needed based on stakeholder feedback. Consensus will be

4   reached through discussion or final decision by a third reviewer (senior authors EN and CS) if

5   necessary. Any challenges in the organization / categorization of data at this stage will be

6   brought to the four content experts on this protocol (CS, SB, NK, EN), each of whom have over

7   10 years of research and/or clinical experience in young adult mental health and resiliency.

8   *Table 1. Draft charting form*

General document details	
APA citation	Full author, date and journal details.
Country and location	Country of publication (and location if provided).
Study characteristics	
Study purpose	Purpose, research question(s), aim(s), and/or objective(s) of the study.
Study population and sample size	Age range, SMI diagnosis, relevant demographic characteristics. Number of participants.
Study design and methods	Quantitative, qualitative, or mixed methods. Main experimental, observational or qualitative methods used.
	Intervention (if applicable): Description of key characteristics (e.g., intervention purpose / target, type, main components, duration)
	Youth engagement (if applicable): Extent to which youth with SMI were engaged through aspects of the research process.
	Intersectional approaches (if applicable): Description of recruitment procedures, theoretical frameworks, and analyses addressing diversity and intersecting social identities of participants.
Context	The setting of the research if provided (e.g., community, health-oriented, specific treatment / program).
Conceptualization and operationalization of resilience	
Conceptualization	How was resilience described from a process-oriented perspective?
Definition of resilience	Definition or operationalization of resilience.
Theoretical framework/model	Theory, conceptual model(s) or framework(s) applied.
Seminal papers referenced	Overarching paradigm and seminal conceptual papers that have informed the research (if applicable).
Instruments used to measure resilience	Specific measures / surveys employed (if applicable).

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Academic discipline	Broad field of research or practice.
Resilience factors and outcomes	
Adversity / risks	Personal or environmental risk factors identified (if applicable).
Internal / external protective factors	Personal or environmental protective factors identified (if applicable).
Self-regulatory strategies	Strategies identified to self-manage mood, emotions, thoughts, and/or behaviors (if applicable).
Study outcomes	Any outcomes that were measured or described. Description of positive change, resilience-related outcomes, or adaptation (if applicable).
Important results	Description of main findings and implications.

Stage 5: Collating, Summarizing, and Reporting the Results

The PRISMA-ScR Checklist will guide the presentation of results in the final report (45). This will include a flow diagram to explicitly detail review decision making processes (45). Data from eligible full-texts will be analyzed and collated using meta-narrative and qualitative content analyses as well as descriptive statistics (e.g., frequencies / counts). Results of this scoping review will be summarized narratively in a descriptive overview (42,43).

Qualitative content analysis will be used to identify, analyze, and report patterns across the included empirical sources to understand how resilience has been conceptualized and operationalized among transition-age youth with SMI. Particularly, definitions, measures, resilience factors and outcomes will be open-coded, and then grouped to generate distinct categories. Aspects of the study population and context of mental health recovery may also be analyzed. The inductive and reflexive coding process will be completed by two reviewers (authors AN and MD) using Nvivo software. Categories will then be reviewed and discussed with all members of the multidisciplinary review team (CS, SB, NK, EN) for further refinement. As guided by Greenhalgh et al. (2005) for meta-narrative review, findings will be organized and synthesized to map conceptualizations of resilience over time and across different research

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1 traditions (58). Research traditions will be identified through a process of grouping articles that

2 reflect similar theoretical, methodological and/or instrumental approaches (e.g., seminal papers

3 cited, how the authors' frame the concept of resilience within the study outcomes or

4 implications). This will allow for easier interpretation of the extent and breadth of the current

5 literature on resilience among transition-age youth diagnosed with SMI. Particularly,

6 comparisons and tensions across definitions of resilience may be highlighted according to each

7 paradigm.

8 Reflexivity will support methodological rigor and transparency by explicitly

9 acknowledging how the researchers' positionality may influence the motivations and

10 methodological choices that ultimately shape the review process, interpretations, and results (59–

11 61). Ongoing reflexive practice will be used to address and challenge researcher biases,

12 assumptions, and preunderstandings that may influence study decisions and analyses, and to

13 critically analyze positions of privilege and power in research activities. Detailed notes of our

14 decision-making processes and justifications will be documented throughout all stages of the

15 scoping review.

16 For the purpose of the present scoping review, we will use a combination of narrative,

17 tabular, and graphical summaries to present key findings (42,43). A traditional summary chart

18 will describe key characteristics of each included source (e.g., author and year of publication,

19 research tradition, academic discipline, study design, study population, definitions of resilience,

20 measures, main findings). Resilience factors and outcomes will be summarized in a table or

21 figure. A creative graphical / visual depiction of identified research traditions and timeframe will

22 also be used to "map" key findings of the review (58). In sum, the analytic approach has been

23 developed to facilitate conceptual / theoretical advancements in resilience research, identify key

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1   knowledge gaps, and highlight potential future directions in the study of transition-age youth

2   resilience and mental health. The presentation and reporting of results (through summaries,

3   tables, and visuals) will be discussed among the multidisciplinary review team and community

4   stakeholder group. Consistent input from the perspective of researchers, clinicians, and

5   transition-age youth with SMI will enhance the relevance and utility of the review findings.

6   **Stage 6: Stakeholder Consultation**

7   The overarching goal of the current scoping review is to systematically explore the

8   current extent and breadth of peer reviewed research on resilience among transition-age youth

9   diagnosed with SMI. Particularly, efforts have been made within the scoping review

10   methodology to provide a holistic and coherent overview of evidence that can inform future

11   research, education, and practice (41–43). In order to achieve these goals, the multidisciplinary

12   review team has been formed to include knowledgeable stakeholders (researchers, clinicians,

13   knowledge users) with backgrounds in psychiatry / early intervention services (NK),

14   occupational therapy / resiliency in rehabilitation sciences (AN, SB, EN), and kinesiology /

15   young adult mental health programming (MD, CS).

16   Following Levac and colleagues' (2010) recommendations, this scoping review will also

17   consult with community stakeholders to gain the perspectives of transition-age youth with lived

18   experience of SMI, clinicians, and other mental health / resiliency researchers (43). Community

19   stakeholders will be invited through the review team's current research / practice networks and

20   established partnerships with youth-focused mental health services in Canada. Consultative

21   meetings will be held at two time points to inform: i) the research question and methods (topic

22   consultation meeting), and ii) interpretation, reporting and knowledge translation strategies

23   (reaction meeting) (62).

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1   At the time of the "reaction meeting", up to three focus groups will be conducted as a

2   more formal consultation among the community stakeholders and the review team. Those who

3   consent to participate will be asked about their impression of key review findings (e.g., how

4   resilience has been defined), whether this resonates with them/their experiences, where

5   gaps/tensions exist that require further investigation, and how this knowledge can be applied to

6   support mental health recovery. This will shape how results are presented and interpreted in the

7   final scoping review paper and guide decision making on knowledge dissemination strategies.

8   We will aim for equal representation among the researchers, clinicians, and young people

9   involved. Focus groups will be carried out either in-person or virtually using a semi-structured

10   interview guide. Audio recordings will be transcribed verbatim to complete thematic analysis.

11   Complete methods and results will be detailed in the final report (including stakeholder group

12   characteristics, sample size, data collection tools, analysis, and findings) (43).

13   Guided by scoping review practices, stakeholder engagement will promote a more

14   collaborative approach, emphasize the voices of young people and knowledge users, and

15   ultimately maximize the potential contribution of the research (43). Particularly, involving

16   transition-age youth with SMI throughout the review process will facilitate feedback on the

17   relevance and usefulness of the review findings. This is considered essential for not only

18   advancing research and practice in youth mental health, but also addressing recent concerns of

19   the "weaponization" of resiliency in rehabilitation (e.g., adding stress, pressure, or individual

20   onus to "become resilient" at times of increased vulnerability) by drawing on the values and

21   perspectives of young people (63–65).

22

23

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1 **Patient and Public Involvement**

2   Patients and members of the public have not been involved in the design of this scoping

3 review and the protocol development. However, the perspectives of transition-age youth who

4 have experienced SMI will be gathered throughout the review process. Their feedback will

5 inform our methods, interpretation of results, and knowledge dissemination plan.

6   **Ethics and Dissemination**

7   Institutional research ethics board approval will be received prior to the completion of the

8 community stakeholder reaction meeting (stage 6). Results of the review will be disseminated

9 through traditional approaches, including open-access peer-reviewed publication(s),

10 presentations at 1-2 national/international conferences, and a plain-language summary report.

11 Additional knowledge translation strategies may be used dependent on community stakeholder

12 feedback to share findings, key messages and future directions (e.g., infographics, social media).

13   **Conclusion**

14   The distinct impact and burden of SMI among young people has been increasingly

15 recognized among researchers and clinicians. This has provoked new research and care

16 approaches centered on building resiliency. Despite a recent surge in examinations of resilience

17 in the context of transition-age youth mental health recovery, there remains a lack of

18 understanding on the core meanings, processes and outcomes of resilience among this

19 population. To our knowledge, this will be the first scoping review to systematically examine

20 how resilience is conceptualized and operationalized among transition-age youth with SMI, and

21 explore what resilience factors and outcomes have been studied. A comprehensive synthesis,

22 developed in collaboration with community stakeholders, is needed to advance research and

23 clinical practice.

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1 **Contributorship Statement:** AN led the conceptualization of this review and drafted the

2 protocol manuscript with support from CS, MD, SB, NK, and EN. MD was involved in the

3 review design and refining the search strategy. CS, SB, NK, and EN were also involved in the

4 review design, and the development of the eligibility criteria and data extraction forms. All

5 authors provided feedback on the manuscript and approval for submitting this protocol

6 manuscript for publication.

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11 **Patient Consent:** Not required.

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Appendix A
PRISMA-P Checklist

		Reporting Item	Page Number
Title			
Identification	#1a	Identify the report as a protocol of a systematic review	2
Update	#1b	If the protocol is for an update of a previous systematic review, identify as such	N/A
Registration			
	#2	If registered, provide the name of the registry (such as PROSPERO) and registration number	2, 8
Authors			
Contact	#3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	1
Contribution	#3b	Describe contributions of protocol authors and identify the guarantor of the review	1, 22
Amendments			
	#4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	N/A
Support			
Sources	#5a	Indicate sources of financial or other support for the review	--
Sponsor	#5b	Provide name for the review funder and / or sponsor	--
Role of sponsor or funder	#5c	Describe roles of funder(s), sponsor(s), and / or institution(s), if any, in developing the protocol	--
Introduction			
Rationale	#6	Describe the rationale for the review in the context of what is already known	4-7
Objectives	#7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	8-10
Methods			
Eligibility criteria	#8	Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review	11-14

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Information sources	#9	Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage	11-12
Search strategy	#10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	Appendix
Study records - data management	#11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	12
Study records - selection process	#11b	State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis)	12-14
Study records - data collection process	#11c	Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	15-17
Data items	#12	List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications	15-17
Outcomes and prioritization	#13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	15-17
Risk of bias in individual studies	#14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	See note 1
Data synthesis	#15a	Describe criteria under which study data will be quantitatively synthesised	17
Data synthesis	#15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data and methods of combining data from studies, including any planned exploration of consistency (such as I2, Kendall's τ)	N/A
Data synthesis	#15c	Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression)	N/A
Data synthesis	#15d	If quantitative synthesis is not appropriate, describe the type of summary planned	17-18

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| Meta-bias(es) | #16 | Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies) | See note 2 |
| Confidence in cumulative evidence | #17 | Describe how the strength of the body of evidence will be assessed (such as GRADE) | See note 3 |

Author notes

1. N/A for scoping reviews
2. N/A for scoping reviews
3. N/A for scoping reviews

Citation: Moher D, Shamseer L, Clarke M, Ghersi D, Liberati A, Petticrew M, Shekelle P, Stewart LA. Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) 2015 statement. Syst Rev. 2015;4(1):1.

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Appendix B

Preliminary Medline Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-Medline	Results
1	Population (Transition-age youth)	exp Adolescent/ or exp Young Adult/	2578438
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,kf.	583093
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Anxiety Disorders/ or exp "Bipolar and Related Disorders"/ or exp Dissociative Disorders/ or exp "Feeding and Eating Disorders"/ or exp Mood Disorders/ or exp "Attention Deficit and Disruptive Behavior Disorders"/ or exp Personality Disorders/ or exp Schizophrenia/ or exp Psychotic Disorders/ or exp Affective Disorders, Psychotic/ or exp Capgras Syndrome/ or exp Delusional Parasitosis/ or exp Morgellons Disease/ or exp Paranoid Disorders/ or exp Somatoform Disorders/ or exp "Trauma and Stressor Related Disorders"/ or exp Mentally Ill Persons/	1334146
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,kf.	749590
5	Concept (Resilience)	exp Resilience, Psychological/	7420
6	Concept (Resilience)	(resilienc*).tw,kf.	36035
7		1 or 2	2800005
8		3 or 4	1668372
9		5 or 6	37459
10		7 and 8 and 9	3286
11		limit 10 to (english language and humans and yr="2000 - Current")	2796

BMJ Open

Understanding resilience among transition-age youth with serious mental illness: Protocol for a scoping review

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1 **Understanding resilience among transition-age youth with serious mental illness: Protocol**

2 **for a scoping review**

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24 **Word Count:** 4942

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SCOPING REVIEW PROTOCOL

1 **Understanding resilience among transition-age youth with serious mental illness: Protocol**

2 **for a scoping review**

3 **Abstract**

4 **Introduction:** Transition-age youth (16-29 years old) are disproportionately affected by the

5 onset, impact and burden of serious mental illness (SMI; e.g., depression, bipolar disorder,

6 schizophrenia spectrum disorders). Emerging evidence has increasingly highlighted the concept

7 of resilience in mental health promotion and treatment approaches for this population. A

8 comprehensive synthesis of existing evidence is needed to enhance conceptual clarity in this

9 area, identify knowledge gaps, and inform future research and practice. As such, the present

10 scoping review is guided by the following questions: How has resilience been conceptualized

11 and operationalized in the transition-age youth mental health literature? What factors influence

12 resilience among transition-age youth with SMI, and what outcomes have been studied within

13 the context of transition-age youth's mental health recovery?

14 **Methods and analysis:** The present protocol will follow six key stages, in accordance with

15 Arksey and O'Malley's (2005) established scoping review methodology and recent iterations of

16 this framework, and has been registered with Open Science Framework (https://osf.io/rzfc5). The

17 protocol and review process will be carried out by a multidisciplinary team in consultation with

18 community stakeholders. A comprehensive search strategy will be conducted across multiple

19 electronic databases to identify relevant empirical literature. Included sources will address the

20 population of transition-age youth (16-29 years) diagnosed with SMI, the concept of resilience

21 (in any context), and will report original research written in English. Data screening and

22 extraction will be completed by at least two independent reviewers. Following meta-narrative

SCOPING REVIEW PROTOCOL

review and qualitative content analyses, findings will be synthesized as a descriptive overview with tabular and graphical summaries.

Ethics and dissemination: Institutional research ethics board approval will be obtained prior to conducting the community stakeholder input and reaction meetings (consultation stage of this review). Results will be disseminated through conference presentations, publications, and user-friendly reports and graphics.

Strengths and limitations of this study

- This scoping review study will follow recent recommendations and guidance documents to promote methodological rigor and has been registered to enhance transparency.

- Variability in how the population (transition-age youth) and concept (resilience) have been defined, as well as restrictions to the search strategy based on language, date, and publication type may limit the breadth of the search.

- An assessment of the methodological quality of included studies will not be conducted which limits the types of conclusions and implications that can be drawn from the review.

- We will apply an iterative and team-based approach, in consultation with community stakeholders (transition-age youth with SMI, clinicians, researchers) to improve the applicability and dissemination of results.

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1 **Introduction**

2 Transition-age youth (16-29 years old) are the highest risk age group for onset of serious

3 mental illness (SMI; mental illnesses that cause substantial functional impairment, e.g.,

4 depression, bipolar disorder, schizophrenia spectrum disorders), the single most disabling group

5 of disorders worldwide (1,2). The experience of mental illness for young people is unique, in that

6 it arises during a critical period of psychosocial development, identity formation, and many

7 complex life transitions (3,4). Access to supportive treatment and relationships, social

8 marginalization, and stigma continue to influence the course and severity of mental illness for

9 transition-age youth (5). Indeed, SMI can negatively impact one's overall physical health, quality

10 of life, and engagement in meaningful life roles and activities, including academics,

11 employment, and social relationships (1,4,6,7). Further, the experience of chronic and persistent

12 symptoms of mental illness can contribute to suicide risk, which is the second leading cause of

13 death among individuals 15-29 years old globally (8,9). Despite the increased risk and burden of

14 SMI among transition-age youth, this age group faces many barriers in accessing service and

15 supports, as they transition out of youth services and into the adult mental health and addiction

16 services sector (10,11). As such, the identification of factors that contribute to transition-age

17 youth's mental health recovery and early intervention are now recognized as priority areas within

18 national and global mental health strategies and guidelines (11–14).

19 Of particular interest, researchers and clinicians have emphasized the importance of

20 promoting *resilience* in transition-age youth's mental health recovery. Most definitions of

21 resilience refer to positive adaptation in the face of significant adversity as a central or defining

22 feature. However, there are many different ways of conceptualizing resilience (e.g., as a trait,

23 outcome, or dynamic process) (15,16), which has led to some ambiguity in how resilience is

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1   defined and understood across different research disciplines and perspectives (17,18). For

2   example, many authors have conceptualized and discussed resilience as an outcome resulting

3   from changes made at the individual level, or in relation to positive personal attributes (e.g.,

4   hope, self-efficacy, coping) (19,20). This aligns with early definitions of resilience as an

5   exceptional personal quality or trait, that an individual either has or does not have, which will

6   determine their capacity to both endure incredibly stressful life events and continue on a path

7   towards full functional and emotional recovery (15,21,22). Conceptualizations of resilience as a

8   personal trait or outcome have been criticized in recent research as this does not recognize the

9   critical role of one's environment and available resources (17,23).

10   In more contemporary and holistic conceptions, "resilience has come to be seen less in

11   terms of static characteristics within the individual and more as a dynamic and multi-faceted

12   family of processes that evolve over time" (p. 234) (24). To illustrate, resilience has been

13   conceptualized as a dynamic process, involving one's personal characteristics, environment, and

14   support networks, that influence how an individual "bounces back" from challenging

15   circumstances (e.g., onset of mental illness) (16–18,25). This also acknowledges the integral role

16   of not only the individual, but the social and ecological systems that influence resilience (26,27).

17   For example, Wathen and colleagues (2012) offer the following definition further contextualized

18   to the field of trauma and mental health: "Resilience is a dynamic process in which

19   psychological, social, environmental and biological factors interact to enable an individual at any

20   stage of life to develop, maintain, or regain their mental health despite exposure to adversity" (p.

21   10) (28). Through this lens, resilience is seen as fluid (rather than a fixed or pre-determined

22   trait), arising through multiple pathways that lead to positive indices of flourishing and

23   functioning (29). Taken together, processes of resilience are shaped by the complex interplay

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1 between individual experiences of stress / adversity, multimodal "*resilience factors*" (e.g., risks,

2 internal and external protective factors, self-regulatory strategies), as well as one's adaptation

3 and other resilience-related outcomes (25,30).

4   This process-oriented perspective of resilience has gained increased attention in mental

5 health and rehabilitation sciences research over the past two decades (19,29), and has aligned

6 with the paradigm shift towards recovery models of mental health and the growing popularity

7 and application of positive psychology principles in psychiatry (31). Indeed, resilience research

8 and recovery models of mental health share an orientation towards understanding the processes

9 that underly individual experiences (embedded within one's sociocultural context / environment)

10 and emphasize the importance of hope, meaning, engagement, and life satisfaction in one's

11 recovery (32–34). Recent conceptual models (35) and interventions (36,37) focused on youth-

12 specific and integrated mental health services also highlight resilience as an important aspect to

13 the recovery process. Additionally, adopting a resilience perspective aligns with more strengths-

14 based and transdiagnostic approaches which aim to better understand processes of recovery

15 relevant to a broader range of adolescent and young adult mental health service users (38).

16 Researchers have begun to uncover resilience factors across and beyond specific diagnoses,

17 which can be targeted in interventions to promote positive development, functioning, and well-

18 being (26,29,30,39). As such, the study of resilience among transition-age youth with SMI can

19 inform developments in recovery-oriented approaches to service delivery and warrants further

20 exploration.

21   In sum, emerging evidence and frameworks of resilience provide a unique lens to

22 understanding mental health among transition-age youth, with the capacity to recognize

23 individuals' strengths, and move beyond the common focus on illness, deficits and problems in

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1 rehabilitation sciences (35). However, researchers have not yet developed a theoretical

2 framework or model of resilience tailored to the unique experiences of transition-age youth who

3 are diagnosed with SMI to guide research and practice (19). In addition, conceptualizations of

4 resilience vary across the scientific literature, which directly impacts how the concept of

5 resilience is understood, operationalized and applied within this context. This is important to

6 address as discrepancies across definitions of resilience may limit measurement, study

7 comparisons, and current understandings of resiliency-informed care approaches in research and

8 clinical practice (23). A comprehensive synthesis of existing evidence will enhance conceptual

9 clarity in this area, identify factors and outcomes that are relevant to transition-age youth's

10 resilience, and inform future work.

11 **Objectives**

12 The overarching purpose of the present scoping review is to synthesize and describe the

13 breadth of scientific literature on resilience among transition-age youth diagnosed with SMI,

14 identify current knowledge gaps, and recommend key areas for future resilience research among

15 this population. Specifically, this scoping review will explore how the concept of resilience has

16 been conceptualized and operationalized in the transition-age youth mental health literature, and

17 identify resilience factors and outcomes that have been studied within the context of transition-

18 age youth's mental health recovery (e.g., adversity, risks, internal and external protective factors,

19 self-regulatory strategies, adaptation and resilience-related outcomes). The focus of this review

20 will be on conceptualizations of resilience from a process-oriented perspective (rather than as a

21 personal trait or outcome).

22   **Methods and Analysis**

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1   A scoping review design was selected based on the exploratory nature of the proposed

2   research question and the current focus on clarifying the concept of resilience. Particularly, a

3   scoping review design allows for a comprehensive summary of knowledge, inclusive of more

4   broad study objectives and methodologies, and is thus recommended for gaining conceptual

5   clarity and identifying key knowledge gaps (40,41).

6   The scoping review protocol will follow the methodological stages outlined by Arksey

7   and O'Malley (2005), and extended by Levac and colleagues (2010), including: i) identifying the

8   research question, ii) identifying relevant studies, iii) study selection, iv) charting the data, v)

9   collating, summarizing, and reporting the results, and vi) stakeholder consultation (42,43).

10   Throughout the review process, an iterative and reflexive approach will be used in order to refine

11   the initial protocol as needed in consultation with a community stakeholder group (involving

12   researchers, clinicians, and transition-age youth with SMI) (42,43). Recent guidance documents

13   (44) and best practices for conducting and reporting scoping reviews (PRISMA-ScR) (45) will

14   also be applied to promote methodological rigor and transparency. The PRISMA-P checklist (46)

15   can be found in Appendix A (online supplementary). The current protocol has been registered

16   through Open Science Framework (https://osf.io/rzfc5), and will be conducted over a one-year

17   timeframe (December 2021 to November 2022).

Stage 1: Identifying the Research Question

19   This scoping review aims to explore the extent and breadth of the current scientific

20   literature on resilience among transition-age youth diagnosed with SMI. Specifically, the review

21   will address two research questions: (1) How has resilience been conceptualized and

22   operationalized (i.e., defined and measured) in the transition-age youth mental health literature?

23   (2) What factors influence resilience among transition-age youth with SMI, and what outcomes

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1   have been studied within the context of transition-age youth's mental health recovery? The

2   research questions have been broadly framed using the PCC mnemonic to address the *population*

3   of transition-age youth diagnosed with SMI and the *concept* of resilience within any *context* of

4   one's mental health recovery (41). Each component is further clarified below, in accordance with

5   the Joanna Briggs Institute scoping review manual (44).

6   *Population*. For the present review, the population is defined as "transition-age youth",

7   including adolescents and young adults between the ages of 16 and 29 years old, who are

8   entering adulthood and have been diagnosed with SMI. It is important to note that definitions of

9   "youth", "adolescents", and "young adults" differ across various cultures and settings, and are

10   thus highly mixed within the scholarly literature. In order to be inclusive of the most common

11   European/United Nations/WHO definitions of this age group and reflective of current mental

12   health service models, the present review will include studies with participants spanning middle

13   adolescence (age 15) to the "upper limit" of young adulthood (age 36) if the target population is

14   clearly defined as "transition-age youth" (3,14,47–50). Additionally, serious mental illness

15   (SMI) is defined as "a mental, behavioral, or emotional disorder resulting in serious functional

16   impairment, which substantially interferes with or limits one or more major life activities", such

17   as one's interpersonal relationships, self-care, employment, or recreation (51,52). Definitions of

18   SMI exclude dementias, developmental disorders, and substance use disorders, as well as mental

19   disorders due to a general medical condition (52). Examples of mental health conditions that may

20   meet criteria for SMI include: major depressive disorders, bipolar disorders, borderline

21   personality disorder, anxiety disorders, eating disorders and schizophrenia spectrum disorders

22   (51,52). Among youth and adolescents (under age 18) the same definition and examples are

23   applied but also occasionally termed "serious emotional disturbance" (SED), rather than SMI

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1   (52,53). Studies with participants experiencing co-morbid disorders which are not the primary

2   focus will also be included in this scoping review.

3   ***Concept.*** While definitions of resilience vary across different research disciplines, most

4   definitions refer to positive adaptation in the face of significant challenge, risk or adversity as

5   central or defining features, and acknowledge the importance of sociocultural factors in shaping

6   experiences and understandings of resilience (19). For the purpose of this scoping review,

7   resilience is defined as a dynamic process that unfolds over time, involving multiple resilience

8   factors that interact to enable individuals to negotiate or recover from stressful life events /

9   adversity (e.g., one's personal characteristics, environment and support networks). Studies that

10 adopt this process-oriented perspective will be included, and the following core elements of

11 resilience and resilience factors will be explored: adversity, risks, internal and external protective

12 factors, self-regulatory strategies, adaptation and resilience-related outcomes (25,30). Studies

13 that focus solely on a trait perspective of resilience, similar constructs (e.g., ego-resilience,

14 psychological capital) or biological / genetic / neurophysiological factors will be omitted. Lastly,

15 given our focus on psychological resilience at the person- or individual-level, studies evaluating

16 family- or community-level resilience will not be included.

17   ***Context.*** While "clinical recovery" is often defined as a reduction in SMI symptoms or

18 impairment (typically in clinical / health care settings), "personal recovery" refers to the

19 processes that contribute to transition-age youth's hope, development, and engagement in

20 meaningful activities (even while facing SMI) and emphasizes the importance of multiple

21 contexts where this occurs (e.g., spanning personal, familial, social and institutional

22 environments) (35). The present review considers mental health recovery primarily through a

23 personal recovery lens, and will thus explore transition-age youth's resilience in any context of

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1 their mental health recovery, which may include individual, community, and health-oriented

2 settings (among others).

Stage 2: Identifying Relevant Literature

4   *Information source.* To comprehensively review the existing evidence and knowledge

5 base related to resilience in the field of transition-age youth mental health, empirical sources will

6 be considered, including original research / primary studies. Specifically, six electronic databases

7 of value to the fields of psychology, health and rehabilitation sciences will be searched to

8 identify relevant empirical studies: MEDLINE (Ovid), EMBASE (Ovid), PsycINFO, AMED,

9 CINAHL, and Scopus. To enhance the comprehensiveness of the search, relevant journals and

10 the reference list of included sources and similar reviews will be manually searched.

11   *Search strategy.* The search terms and search strategy will be developed by the

12 multidisciplinary review team, in consultation with a health sciences librarian at the University

13 of Toronto. Importantly, keywords have been carefully selected to best capture the complex and

14 evolving terminology used to describe the population and concept reflected in our research

15 question. As mentioned, terms to describe the age group of transition-age youth are highly

16 variable and inconsistent within the literature (e.g., subject headings / keywords may be inclusive

17 of youth / teenagers / adolescents / emerging adults / adults etc.). Clinical and lay language to

18 describe SMI diagnoses have also evolved over time, with "severe and persistent mental illness"

19 and "chronic mental illness" often cited (52). Further, as reflected in the research aims, there is

20 currently no consensus on the definition of resilience and conceptualizations differ based on the

21 context or academic discipline applied (19). To overcome these challenges in the development

22 and execution of our search, we will utilize the following techniques: i) a multi-step search

23 process to ensure relevant sources are not missed (an initial limited search strategy favoring

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1   sensitivity over precision will be conducted first and inform potential revisions making the

2   search strategy more precise); ii) use of Yale MeSH analyzer for piloting; and iii) ongoing expert

3   consultation. Additionally, the search strategy will undergo peer review to enhance its feasibility

4   and rigor (e.g., CADTH Peer Review Checklist for Search Strategies) (54).

5   The preliminary search strategy and list of keywords have been developed using

6   MEDLINE (Ovid) and adapted to each database (see Appendix B online supplementary). The

7   search strategy will explore specified search terms within subject headings, titles, abstracts and

8   keywords. Search terms will be combined using appropriate Boolean logic and operators (e.g.,

9   'and', 'or', 'not').

10 **Stage 3: Study Selection**

11   Study selection will follow a collaborative and iterative screening process among the

12 review team using Covidence systematic review software (55) and pre-determined eligibility

13 criteria (42,43). All search results will be exported to Covidence for data management and to

14 remove duplicates. At least two independent reviewers (authors AN and MD) will complete

15 screening in two stages for i) title/abstract and ii) full-text review. The reviewers will complete a

16 calibration exercise using a sample of 10 references to pilot inclusion / exclusion criteria and

17 compare decisions (e.g., include / exclude / uncertain). Formal title/abstract screening will

18 commence when 80% agreement is achieved and will involve regular meetings among reviewers

19 to discuss any challenges or uncertainties. Upon completion of stage 1, full-text references will

20 be obtained and independently screened by the same two reviewers. The same strategy will be

21 applied to stage 2 full-text screening, including piloting (calibration exercise for 10 references)

22 and regular discussion. At each stage, reviewer (inter-rater) agreement will be reported.

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1 Disagreements will be resolved by consensus or by the decision of a third reviewer (senior

2 authors EN and CS).

3   Included sources will address the population of transition-age youth diagnosed with SMI,

4 the concept of resilience (in any context), and will contain original peer reviewed research

5 written in English. Specific language restrictions were made for feasibility purposes.

6 Additionally, the publishing date was limited to the years 2000 to 2022 as this is the time period

7 where a significant rise in resilience research emerged within mental health and rehabilitation

8 sciences (19,29,56). The prioritisation, implementation and evaluation of mental health services

9 specifically tailored to transition-age youth (e.g., early intervention programs) also mainly took

10 root after the year 2000 (13,47,57). Further inclusion / exclusion criteria for the two-stage

11 screening are detailed below.

12 ***Eligibility for Stage 1 Title/Abstract Review:***

13   ***Inclusion criteria.*** a) Population: Refers to transition-age youth diagnosed or living with

14 SMI (as defined previously). b) Concept: Resilience / resiliency is identified as a key focus

15 within the purpose / objectives / research question, outcome measure, and/or findings. c)

16 Context: Is set in any individual, community or health-oriented context of mental health

17 recovery. d) Type of source: Peer reviewed original research (quantitative, qualitative, mixed

18 method). e) Publication language / date: Written in English and published between 2000 and

19 2022.

20   ***Exclusion criteria.*** a) Population: Refers to non-clinical population, general population,

21 children / youth (age 0-14), or childhood developmental disorder. b) Concept: Resilience /

22 resiliency is not an explicit focus. c) Type of source: Peer reviewed articles with the primary aim

23 of developing, reporting or validating the psychometric properties of survey measures /

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1   instruments, study protocols, review articles (e.g., systematic/scoping reviews, meta-analyses),

2   books / book chapters, and grey literature (e.g., editorials, commentaries / reports, clinical

3   guidelines, conference proceedings, and theses / dissertations). d) Publication language / date:

4   Written in another language than English and published before January 1, 2000.

5   ***Eligibility for Stage 2 Full-text Review:***

6   ***Inclusion criteria.*** a) Population: Clearly defined clinical population in accordance with

7   either: participant self-reported history of SMI; clinician confirmed diagnosis of SMI; or DSM-V

8   / ICD-10 system diagnostic criteria. b) Concept: Must explicitly define / operationalize the

9   concept of resilience from a process-oriented perspective and focus on individual-level

10 resilience.

11 ***Exclusion criteria.*** a) Population: Mixed samples whereby transition-age youth with SMI

12 are encompassed within broader age groups or the general population (without the stratification

13 of results / reporting). b) Concept: Trait resilience, other psychological constructs that are similar

14 or connected to resilience / resiliency (e.g., psychological capital, hardiness, grit, general indices

15 of subjective well-being), family- or community-level resilience, or biological / genetic /

16 neurophysiological factors are identified as the sole / primary focus or outcome.

17 While criteria were developed to maintain a broad scope of selected studies, our hope is

18 that stringent inclusion / exclusion criteria will eliminate sources that only include the concept of

19 resilience as an opinion, recommendation, vague interpretation, or buzzword – as this will not

20 aid in enhancing conceptual clarity in this research area. As such, these broad eligibility criteria

21 may undergo further refinement to ensure that selected sources capture the full breadth of

22 knowledge available related to resilience among young people with SMI.

23 **Stage 4: Data Extraction**

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1   Following recommended data charting methods (42,43), a standardized and systematic

2 charting form (Table 1) will be used to organize and interpret relevant details from the selected

3 sources in line with our research question and objectives. The following information will be

4 charted in Excel: i) general document details, ii) key characteristics of empirical studies (e.g.,

5 research design, methods, intervention details, youth engagement, intersectional approaches,

6 study population, context), iii) how resilience was conceptualized and operationalized (e.g.,

7 definition, theoretical framework / model, academic discipline, measures), and iv) resilience

8 factors and outcomes identified.

9   The preliminary chart form was also developed in accordance with Greenhalgh and

10 colleagues' (2005) meta-narrative approach (58). Specifically, this meta-narrative approach was

11 originally created to detail how a field of study or key concept has evolved over time and to

12 explore potential tensions that exist across research traditions (or "paradigms") within

13 knowledge syntheses (58). A meta-narrative approach is recommended when examining

14 complex, heterogeneous bodies of literature where a key concept of interest has been

15 conceptualized and investigated through different research traditions, and conceptual clarity is

16 needed (58). According to Greenhalgh et al. (2005), a *research tradition* refers to a paradigm of

17 inquiry, undertaken by researchers, that shares four key interrelated dimensions (conceptual,

18 theoretical, methodological, instrumental), and thus shows distinct disciplinary roots, scope and

19 key concepts (58). Research traditions are often characterized and influenced by seminal

20 conceptual papers that inform the direction and focus of future work (58). Alternatively, an

21 *academic discipline* is defined as a broader field of study or branch of knowledge (e.g.,

22 sociology, psychology, medicine) (58).

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1   Data extraction will be a collaborative and iterative process among the review team to

2   ensure that key characteristics, definitions, themes and strengths/limitations are captured. A

3   calibration exercise using a sample of 5 studies will be completed by two reviewers to pilot the

4   chart form. When agreement of at least 80% is achieved, the two independent reviewers (authors

5   AN and MD) will complete the remaining formal data charting procedures for all references. The

6   charting form will be revised as needed based on stakeholder feedback. Consensus will be

7   reached through discussion or final decision by a third reviewer (senior authors EN and CS) if

8   necessary. Any challenges in the organization / categorization of data at this stage will be

9   brought to the four content experts on this protocol (CS, SB, NK, EN), each of whom have over

10   10 years of research and/or clinical experience in young adult mental health and resiliency.

11   *Table 1. Draft charting form*

General document details	
APA citation	Full author, date and journal details.
Country and location	Country of publication (and location if provided).
Study characteristics	
Study purpose	Purpose, research question(s), aim(s), and/or objective(s) of the study.
Study population and sample size	Age range, SMI (clinical diagnosis / self-reported; stage of illness), relevant demographic characteristics. Number of participants.
Study design and methods	Quantitative, qualitative, or mixed methods. Main experimental, observational or qualitative methods used.
	Intervention (if applicable): Description of key characteristics (e.g., intervention purpose / target, type, main components, duration)
	Youth engagement (if applicable): Extent to which youth with SMI were engaged through aspects of the research process.
	Intersectional approaches (if applicable): Description of recruitment procedures, theoretical frameworks, and analyses addressing diversity and intersecting social identities of participants.
Context	The setting of the research if provided (e.g., community, health-oriented, specific treatment / program).
Conceptualization and operationalization of resilience	

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Conceptualization	How was resilience described from a process-oriented perspective?
Definition of resilience	Definition or operationalization of resilience.
Theoretical framework/model	Theory, conceptual model(s) or framework(s) applied.
Seminal papers referenced	Overarching paradigm and seminal conceptual papers that have informed the research (if applicable).
Instruments used to measure resilience	Specific measures / surveys employed (if applicable).
Academic discipline	Broad field of research or practice.
Resilience factors and outcomes	
Adversity / risks	Personal or environmental risk factors identified (if applicable).
Internal / external protective factors	Personal or environmental protective factors identified (if applicable).
Self-regulatory strategies	Strategies identified to self-manage mood, emotions, thoughts, and/or behaviors (if applicable).
Study outcomes	Any outcomes that were measured or described. Description of positive change, resilience-related outcomes, or adaptation (if applicable).
Important results	Description of main findings and implications.

Stage 5: Collating, Summarizing, and Reporting the Results

The PRISMA-ScR Checklist will guide the presentation of results in the final report (45). This will include a flow diagram to explicitly detail review decision making processes (45). Data from eligible full-texts will be analyzed and collated using meta-narrative and qualitative content analyses as well as descriptive statistics (e.g., frequencies / counts). Results of this scoping review will be summarized narratively in a descriptive overview (42,43).

Qualitative content analysis will be used to identify, analyze, and report patterns across the included empirical sources to understand how resilience has been conceptualized and operationalized among transition-age youth with SMI. Particularly, definitions, measures, resilience factors and outcomes will be open-coded, and then grouped to generate distinct categories. Aspects of the study population and context of mental health recovery may also be analyzed. The inductive and reflexive coding process will be completed by two reviewers

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1   (authors AN and MD) using Nvivo software. Categories will then be reviewed and discussed

2   with all members of the multidisciplinary review team (CS, SB, NK, EN) for further refinement.

3   As guided by Greenhalgh et al. (2005) for meta-narrative review, findings will be organized and

4   synthesized to map conceptualizations of resilience over time and across different research

5   traditions (58). Research traditions will be identified through a process of grouping articles that

6   reflect similar theoretical, methodological and/or instrumental approaches (e.g., seminal papers

7   cited, how the authors frame the concept of resilience within the study outcomes or

8   implications). This will allow for easier interpretation of the extent and breadth of the current

9   literature on resilience among transition-age youth diagnosed with SMI. Particularly,

10   comparisons and tensions across definitions of resilience may be highlighted according to each

11   paradigm.

12   Reflexivity will support methodological rigor and transparency by explicitly

13   acknowledging how the researchers' positionality may influence the motivations and

14   methodological choices that ultimately shape the review process, interpretations, and results (59–

15   61). Ongoing reflexive practice will be used to address and challenge researcher biases,

16   assumptions, and preunderstandings that may influence study decisions and analyses, and to

17   critically analyze positions of privilege and power in research activities. Detailed notes of our

18   decision-making processes and justifications will be documented throughout all stages of the

19   scoping review.

20   For the purpose of the present scoping review, we will use a combination of narrative,

21   tabular, and graphical summaries to present key findings (42,43). A traditional summary chart

22   will describe key characteristics of each included source (e.g., author and year of publication,

23   research tradition, academic discipline, study design, study population, definitions of resilience,

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1   measures, main findings). Resilience factors and outcomes will be summarized in a table or

2   figure. A creative graphical / visual depiction of identified research traditions and timeframe will

3   also be used to "map" key findings of the review (58). In sum, the analytic approach has been

4   developed to facilitate conceptual / theoretical advancements in resilience research, identify key

5   knowledge gaps, and highlight potential future directions in the study of transition-age youth

6   resilience and mental health. The presentation and reporting of results (through summaries,

7   tables, and visuals) will be discussed among the multidisciplinary review team and community

8   stakeholder group. Consistent input from the perspective of researchers, clinicians, and

9   transition-age youth with SMI will enhance the relevance and utility of the review findings.

10   **Stage 6: Stakeholder Consultation**

11   The overarching goal of the current scoping review is to systematically explore the

12   current extent and breadth of peer reviewed research on resilience among transition-age youth

13   diagnosed with SMI. Particularly, efforts have been made within the scoping review

14   methodology to provide a holistic and coherent overview of evidence that can inform future

15   research, education, and practice (41–43). In order to achieve these goals, the multidisciplinary

16   review team has been formed to include knowledgeable stakeholders (researchers, clinicians,

17   knowledge users) with backgrounds in psychiatry / early intervention services (NK),

18   occupational therapy / resiliency in rehabilitation sciences (AN, SB, EN), and kinesiology /

19   young adult mental health programming (MD, CS).

20   Following Levac and colleagues' (2010) recommendations, this scoping review will also

21   consult with community stakeholders to gain the perspectives of transition-age youth with lived

22   experience of SMI, clinicians, and other mental health / resiliency researchers (43). To achieve

23   Stage 6 of this review, qualitative focus groups will be conducted virtually (using online

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1 teleconferencing). Community stakeholders will be invited through the review team's current

2 research / practice networks and established partnerships with youth-focused mental health

3 services in Canada. Recruitment materials (emails, e-posters) will share details regarding

4 eligibility, focus group participation, and the letter of informed consent form. Interested

5 participants will provide written informed consent by digitally signing a secure online consent

6 form on the University of Toronto's Research Electronic Data Capture (REDCap) platform.

7 Consultative meetings will be held at two time points to inform: i) the research methods

8 (Topic Consultation and Input Meeting), and ii) interpretation, reporting and knowledge

9 translation strategies (Reaction Meeting). Following current recommendations for stakeholder

10 consultation (43,62,63) and focus group studies (64,65), up to 3 focus groups (n = 6-10

11 participants each) will be conducted at each time point. For the Topic Consultation and Input

12 Meeting, community stakeholders will be asked about their perspectives of the review objectives

13 and methods, key areas of focus for data extraction and analysis (e.g., important aspects of

14 transition-age youth resilience to capture within the charting form), and what they would most

15 like to learn from the results of the scoping review. At the time of the Reaction Meeting,

16 community stakeholders will be asked about their impression of key review findings (e.g., how

17 resilience has been defined), whether this resonates with them/their experiences, where

18 gaps/tensions exist that require further investigation, and how this knowledge can be applied to

19 support mental health recovery. This will shape how results are presented and interpreted in the

20 final scoping review paper and guide decision making on knowledge dissemination strategies.

21 We will aim for equal representation among the researchers, clinicians, and young people

22 involved in each focus group. The consent form and group norms will be reviewed with

23 participants at the start of each focus group discussion. Focus groups will be co-facilitated by

21

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1 two members of the review team (AN, MD) virtually using a semi-structured interview guide.

2 Audio recordings will be transcribed verbatim to complete directed content analysis (66).

3 Complete methods and results will be detailed in the final report (including stakeholder group

4 characteristics, sample size, data collection tools, analysis, and findings) (43). Several

5 recommendations to enhance the trustworthiness of qualitative content analysis will be employed

6 (67,68), including: (i) member checking, (ii) clear description of the context and participant

7 characteristics, (iii) transparent reporting of the coding process and agreement, and (iv) use of

8 illustrative quotes, as well as frequencies / counts where appropriate, to summarize results.

9 Guided by scoping review practices, stakeholder engagement will promote a more

10 collaborative approach, emphasize the voices of young people and knowledge users, and

11 ultimately maximize the potential contribution of the research (43). Particularly, involving

12 transition-age youth with SMI as part of the review process will facilitate feedback on the

13 relevance and usefulness of the review findings. This is considered essential for not only

14 advancing research and practice in youth mental health, but also addressing recent concerns of

15 the "weaponization" of resiliency in rehabilitation (e.g., adding stress, pressure, or individual

16 onus to "become resilient" at times of increased vulnerability) by drawing on the values and

17 perspectives of young people (69–71).

18 **Patient and Public Involvement**

19 Patients and members of the public have not been involved in the design of this scoping

20 review and the protocol development. However, the perspectives of transition-age youth who

21 have experienced SMI will be gathered during the review process. Their feedback will inform

22 our methods, interpretation of results, and knowledge dissemination plan.

23 **Ethics and Dissemination**

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1   Institutional research ethics board approval will be received prior to the completion of the

2   community stakeholder input and reaction meetings (stage 6). Results of the review will be

3   disseminated through traditional approaches, including open-access peer-reviewed

4   publication(s), presentations at 1-2 national/international conferences, and a plain-language

5   summary report. Additional knowledge translation strategies may be used dependent on

6   community stakeholder feedback to share findings, key messages and future directions (e.g.,

7   infographics, social media).

Conclusion

9   The distinct impact and burden of SMI among young people has been increasingly

10   recognized among researchers and clinicians. This has provoked new research and care

11   approaches centered on building resiliency. Despite a recent surge in examinations of resilience

12   in the context of transition-age youth mental health recovery, there remains a lack of

13   understanding on the core meanings, processes and outcomes of resilience among this

14   population. To our knowledge, this will be the first scoping review to systematically examine

15   how resilience is conceptualized and operationalized among transition-age youth with SMI, and

16   explore what resilience factors and outcomes have been studied. A comprehensive synthesis,

17   developed in collaboration with community stakeholders, is needed to advance research and

18   clinical practice.

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1   **Contributorship Statement:** AN led the conceptualization of this review and drafted the

2   protocol manuscript with support from CS, MD, SB, NK, and EN. MD was involved in the

3   review design and refining the search strategy. CS, SB, NK, and EN were also involved in the

4   review design, and the development of the eligibility criteria and data extraction forms. All

5   authors provided feedback on the manuscript and approval for submitting this protocol

6   manuscript for publication.

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24

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Appendix A

PRISMA-P Checklist

		Reporting Item	Page Number
Title			
Identification	#1a	Identify the report as a protocol of a systematic review	2
Update	#1b	If the protocol is for an update of a previous systematic review, identify as such	N/A
Registration			
	#2	If registered, provide the name of the registry (such as PROSPERO) and registration number	2, 8
Authors			
Contact	#3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	1
Contribution	#3b	Describe contributions of protocol authors and identify the guarantor of the review	1, 23
Amendments			
	#4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	N/A
Support			
Sources	#5a	Indicate sources of financial or other support for the review	--
Sponsor	#5b	Provide name for the review funder and / or sponsor	--
Role of sponsor or funder	#5c	Describe roles of funder(s), sponsor(s), and / or institution(s), if any, in developing the protocol	--
Introduction			
Rationale	#6	Describe the rationale for the review in the context of what is already known	4-7
Objectives	#7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	8-10
Methods			
Eligibility criteria	#8	Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review	11-14

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Information sources	#9	Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage	11-12
Search strategy	#10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	Appendix B
Study records - data management	#11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	12
Study records - selection process	#11b	State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis)	12-14
Study records - data collection process	#11c	Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	15-17
Data items	#12	List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications	15-17
Outcomes and prioritization	#13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	15-17
Risk of bias in individual studies	#14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	See note 1
Data synthesis	#15a	Describe criteria under which study data will be quantitatively synthesised	17-18
Data synthesis	#15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data and methods of combining data from studies, including any planned exploration of consistency (such as I2, Kendall's τ)	N/A
Data synthesis	#15c	Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression)	N/A
Data synthesis	#15d	If quantitative synthesis is not appropriate, describe the type of summary planned	17-18

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SCOPING REVIEW PROTOCOL

| Meta-bias(es) | [#16](#) | Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies) | See note 2 |
| Confidence in cumulative evidence | [#17](#) | Describe how the strength of the body of evidence will be assessed (such as GRADE) | See note 3 |

Author notes

1. N/A for scoping reviews
2. N/A for scoping reviews
3. N/A for scoping reviews

Citation: Moher D, Shamseer L, Clarke M, Ghersi D, Liberati A, Petticrew M, Shekelle P, Stewart LA. Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) 2015 statement. Syst Rev. 2015;4(1):1.

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SCOPING REVIEW PROTOCOL

Appendix B

Medline Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-Medline
1	Population (Transition-age youth)	exp Adolescent/ or exp Young Adult/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,kf.
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Anxiety Disorders/ or exp "Bipolar and Related Disorders"/ or exp Dissociative Disorders/ or exp "Feeding and Eating Disorders"/ or exp Mood Disorders/ or exp "Attention Deficit and Disruptive Behavior Disorders"/ or exp Personality Disorders/ or exp Schizophrenia/ or exp Psychotic Disorders/ or exp Affective Disorders, Psychotic/ or exp Capgras Syndrome/ or exp Delusional Parasitosis/ or exp Morgellons Disease/ or exp Paranoid Disorders/ or exp Somatoform Disorders/ or exp "Trauma and Stressor Related Disorders"/ or exp Mentally Ill Persons/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,kf.
5	Concept (Resilience)	exp Resilience, Psychological/
6	Concept (Resilience)	(resilienc*).tw,kf.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

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SCOPING REVIEW PROTOCOL

Embase Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-Embase
1	Population (Transition-age youth)	exp Adolescent/ or exp Young Adult/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,kf.
3	Population (Serious mental illness)	exp Mental Disease/ or exp Anxiety Disorder/ or exp Bipolar Disorder/ or exp Dissociative Disorder/ or exp Eating Disorder/ or exp Emotional Disorder/ or exp Mood Disorder/ or exp Attention Deficit Disorder/ or exp Impulse Control Disorder/ or exp Neurosis/ or exp Personality Disorder/ or exp Schizophrenia Spectrum Disorder/ or exp Schizophrenia/ or exp Psychosis/ or exp Somatoform Disorder/ or exp Posttraumatic Stress Disorder/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,kf.
5	Concept (Resilience)	exp Psychological Resilience/
6	Concept (Resilience)	(resilienc*).tw,kf.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

SCOPING REVIEW PROTOCOL

PsychINFO Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-PsychINFO
1	Population (Transition-age youth)	exp Emerging Adulthood/ or exp Early Adolescence/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw.
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Chronic Mental Illness or exp Serious Mental Illness/ or exp Affective Disorders or exp Anxiety Disorders/ or exp Attention Deficit Disorder/ or exp Bipolar Disorder/ or exp Dissociative Disorders/ or exp Disruptive Behavior Disorders/ or exp Eating Disorders/ or exp Personality Disorders/ or exp Psychosis/ or exp Schizophrenia/ or exp Somatoform Disorders/ or exp "Stress and Trauma Related Disorders"/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw.
5	Concept (Resilience)	exp "Resilience (Psychological)"/
6	Concept (Resilience)	(resilienc*).tw.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

SCOPING REVIEW PROTOCOL

AMED Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-AMED
1	Population (Transition-age youth)	exp Adolescent/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,et.
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Adjustment Disorders/ or exp Affective Disorders/ or exp Affective Disorders Psychotic/ or exp Bipolar Disorder/ or exp Manic Disorder/ or exp Depressive Disorder/ or exp Mood Disorders/ or exp Anxiety Disorders/ or exp Obsessive Compulsive Disorder/ or exp Phobic Disorders/ or exp Stress Disorders Post Traumatic/ or exp Attention Deficit Disorder with Hyperactivity or exp Child Behavior Disorders/ or exp Dissociative Disorders/ or exp Multiple Personality Disorder/ or exp Eating Disorders/ or exp Anorexia Nervosa/ or exp Bulimia/ or exp Neurotic Disorders/ or exp Personality Disorders/ or exp Borderline Personality Disorder/ or exp Hysteria/ or exp Psychotic Disorders/ or exp Schizophrenia/ or exp Somatoform Disorders/ or exp Conversion Disorder/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,et.
5	Concept (Resilience)	exp Adaptation Psychological/
6	Concept (Resilience)	(resilienc*).tw,et.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english and yr="2000 -Current")

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SCOPING REVIEW PROTOCOL

CINHAL Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into CINHAL (EBSCO)
1	Population (Transition-age youth)	(MH "Adolescence+") OR (MH "Young Adult")
2	Population (Transition-age youth)	TI (youth* or "transition age youth*" or teen* or adolescen* or "emerging adult*" or "young adult*" or "early adult*" or "young person*" or "young people*" or juvenile*) OR AB (youth* or "transition age youth*" or teen* or adolescen* or "emerging adult*" or "young adult*" or "early adult*" or "young person*" or "young people*" or juvenile*)
3	Population (Serious mental illness)	(MH "Mental Disorders+") or (MH "Mental Disorders, Chronic") or (MH "Neurotic Disorders+") or (MH "Affective Disorders+") or (MH "Seasonal Affective Disorder") or (MH "Depression+") or (MH "Anxiety Disorders+") or (MH "Social Anxiety Disorders") or (MH "Generalized Anxiety Disorder") or (MH "Panic Disorder") or (MH "Obsessive-Compulsive Disorder+") or (MH "Phobic Disorders+") or (MH " Stress Disorders, Post-Traumatic+") or (MH "Psychotic Disorders+") or (MH "Schizophrenia+") or (MH "Affective Disorders, Psychotic+") or (MH "Bipolar Disorders+") or (MH "Dissociative Disorders+") or (MH "Multiple-Personality Disorder") or (MH "Personality Disorders+") or (MH "Adjustment Disorders+") or (MH "Attention Deficit Hyperactivity Disorder") or (MH "Child Behavior Disorders+") or (MH "Eating Disorders+") or (MH "Binge Eating Disorder") or (MH "Avoidant Restrictive Food Intake Disorder") or (MH "Bulimia Nervosa") or (MH "Bulimia") or (MH "Anorexia Nervosa") or (MH "Anorexia") or (MH "Somatoform Disorders+") or (MH "Body Dysmorphic Disorder")
4	Population (Serious mental illness)	TI ("mental disorder*" or "mental illness*" or "psychiatric disabilit*" or "psychiatric disorder*" or "psychiatric diagnosis*" or "serious emotional disturbance*" or "severe emotional disturbance*" or "mental health condition*" or "anxiety disorder*" or phobia* or "phobic disorder*" or "panic disorder*" or "obsessive-compulsive disorder*" or OCD or "bipolar disorder*" or "manic disorder*" or "manic depression" or "dissociative disorder*" or "multiple-personality disorder" or "eating disorder*" or anorexi* or bulimi* or "binge eating*" or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or "disordered eating" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "cyclothymic disorder*" or cyclothymia or "dysthymic disorder*" or dysthymia or "personality disorder*" or "schizophrenia spectrum disorder*" or schizophrenia or "psychotic disorder*" or psychosis or psychoses or "schizoaffective disorder*" or "psychotic affective disorder*" or "paranoid disorder*" or "somatoform disorder*" or "body dysmorphic disorder*" or "body dysmorphi*" or "post-traumatic stress disorder*" or "adjustment disorder*" or PTSD) OR AB ("mental disorder*" or "mental illness*" or "psychiatric disabilit*" or "psychiatric disorder*" or "psychiatric diagnosis*" or "serious emotional disturbance*" or "severe emotional disturbance*" or "mental health condition*" or "anxiety disorder*" or phobia* or "phobic disorder*" or

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		"panic disorder*" or "obsessive-compulsive disorder*" or OCD or "bipolar disorder*" or "manic disorder*" or "manic depression" or "dissociative disorder*" or "multiple-personality disorder" or "eating disorder*" or anorexi* or bulimi* or "binge eating*" or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or "disordered eating" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "cyclothymic disorder*" or cyclothymia or "dysthymic disorder*" or dysthymia or "personality disorder*" or "schizophrenia spectrum disorder*" or schizophrenia or "psychotic disorder*" or psychosis or psychoses or "schizoaffective disorder*" or "psychotic affective disorder*" or "paranoid disorder*" or "somatoform disorder*" or "body dysmorphic disorder*" or "body dysmorphi*" or "post-traumatic stress disorder*" or "adjustment disorder*" or PTSD)
5	Concept (Resilience)	(MH "Hardiness")
6	Concept (Resilience)	TI (resilienc*) OR AB (resilienc*)
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

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Scopus Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into Scopus
1	Population (Transition-age youth)	TITLE-ABS-KEY (youth* or "transition age youth*" or teen* or adolescen* or "emerging adult*" or "young adult*" or "early adult*" or "young person*" or "young people*" or juvenile*)
2	Population (Serious mental illness)	TITLE-ABS-KEY ("mental disorder*" or "mental illness*" or "psychiatric disabilit*" or "psychiatric disorder*" or "psychiatric diagnosis*" or "serious emotional disturbance*" or "severe emotional disturbance*" or "mental health condition*" or "anxiety disorder*" or phobia* or "phobic disorder*" or "panic disorder*" or "obsessive-compulsive disorder*" or OCD or "bipolar disorder*" or "manic disorder*" or "manic depression" or "dissociative disorder*" or "multiple-personality disorder" or "eating disorder*" or anorexi* or bulimi* or "binge eating*" or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or "disordered eating" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "cyclothymic disorder*" or cyclothymia or "dysthymic disorder*" or dysthymia or "personality disorder*" or "schizophrenia spectrum disorder*" or schizophrenia or "psychotic disorder*" or psychosis or psychoses or "schizoaffective disorder*" or "psychotic affective disorder*" or "paranoid disorder*" or "somatoform disorder*" or "body dysmorphic disorder*" or "body dysmorphi*" or "post-traumatic stress disorder*" or "adjustment disorder*" or PTSD)
3	Concept (Resilience)	TITLE-ABS-KEY (resilienc*)
4		1 and 2 and 3
5		limit 4 to (english language and yr="2000 - Current")

BMJ Open

Understanding resilience among transition-age youth with serious mental illness: Protocol for a scoping review

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SCOPING REVIEW PROTOCOL

Understanding resilience among transition-age youth with serious mental illness: Protocol

for a scoping review

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Word Count: 4949

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SCOPING REVIEW PROTOCOL

1 **Understanding resilience among transition-age youth with serious mental illness: Protocol**

2 **for a scoping review**

3 **Abstract**

4 **Introduction:** Transition-age youth (16-29 years old) are disproportionately affected by the

5 onset, impact and burden of serious mental illness (SMI; e.g., depression, bipolar disorder,

6 schizophrenia spectrum disorders). Emerging evidence has increasingly highlighted the concept

7 of resilience in mental health promotion and treatment approaches for this population. A

8 comprehensive synthesis of existing evidence is needed to enhance conceptual clarity in this

9 area, identify knowledge gaps, and inform future research and practice. As such, the present

10 scoping review is guided by the following questions: How has resilience been conceptualized

11 and operationalized in the transition-age youth mental health literature? What factors influence

12 resilience among transition-age youth with SMI, and what outcomes have been studied within

13 the context of transition-age youth's mental health recovery?

14 **Methods and analysis:** The present protocol will follow six key stages, in accordance with

15 Arksey and O'Malley's (2005) established scoping review methodology and recent iterations of

16 this framework, and has been registered with Open Science Framework (https://osf.io/rzfc5). The

17 protocol and review process will be carried out by a multidisciplinary team in consultation with

18 community stakeholders. A comprehensive search strategy will be conducted across multiple

19 electronic databases to identify relevant empirical literature. Included sources will address the

20 population of transition-age youth (16-29 years) diagnosed with SMI, the concept of resilience

21 (in any context), and will report original research written in English. Data screening and

22 extraction will be completed by at least two independent reviewers. Following meta-narrative

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1 review and qualitative content analyses, findings will be synthesized as a descriptive overview

2 with tabular and graphical summaries.

3 **Ethics and dissemination:** Institutional research ethics board approval was obtained to complete

4 the community stakeholder consultation stage of this review. Results will be disseminated

5 through conference presentations, publications, and user-friendly reports and graphics.

6

7 **Strengths and limitations of this study**

8 • This scoping review study will follow recent recommendations and guidance documents

9   to promote methodological rigor and has been registered to enhance transparency.

10 • Variability in how the population (transition-age youth) and concept (resilience) have

11   been defined, as well as restrictions to the search strategy based on language, date, and

12   publication type may limit the breadth of the search.

13 • An assessment of the methodological quality of included studies will not be conducted

14   which limits the types of conclusions and implications that can be drawn from the review.

15 • We will apply an iterative and team-based approach, in consultation with community

16   stakeholders (transition-age youth with SMI, clinicians, researchers) to improve the

17   applicability and dissemination of results.

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Introduction

Transition-age youth (16-29 years old) are the highest risk age group for onset of serious

mental illness (SMI; mental illnesses that cause substantial functional impairment, e.g.,

depression, bipolar disorder, schizophrenia spectrum disorders), the single most disabling group

of disorders worldwide (1,2). The experience of mental illness for young people is unique, in that

it arises during a critical period of psychosocial development, identity formation, and many

complex life transitions (3,4). Access to supportive treatment and relationships, social

marginalization, and stigma continue to influence the course and severity of mental illness for

transition-age youth (5). Indeed, SMI can negatively impact one's overall physical health, quality

of life, and engagement in meaningful life roles and activities, including academics,

employment, and social relationships (1,4,6,7). Further, the experience of chronic and persistent

symptoms of mental illness can contribute to suicide risk, which is the second leading cause of

death among individuals 15-29 years old globally (8,9). Despite the increased risk and burden of

SMI among transition-age youth, this age group faces many barriers in accessing service and

supports, as they transition out of youth services and into the adult mental health and addiction

services sector (10,11). As such, the identification of factors that contribute to transition-age

youth's mental health recovery and early intervention are now recognized as priority areas within

national and global mental health strategies and guidelines (11–14).

Of particular interest, researchers and clinicians have emphasized the importance of

promoting *resilience* in transition-age youth's mental health recovery. Most definitions of

resilience refer to positive adaptation in the face of significant adversity as a central or defining

feature. However, there are many different ways of conceptualizing resilience (e.g., as a trait,

outcome, or dynamic process) (15,16), which has led to some ambiguity in how resilience is

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1 defined and understood across different research disciplines and perspectives (17,18). For

2 example, many authors have conceptualized and discussed resilience as an outcome resulting

3 from changes made at the individual level, or in relation to positive personal attributes (e.g.,

4 hope, self-efficacy, coping) (19,20). This aligns with early definitions of resilience as an

5 exceptional personal quality or trait, that an individual either has or does not have, which will

6 determine their capacity to both endure incredibly stressful life events and continue on a path

7 towards full functional and emotional recovery (15,21,22). Conceptualizations of resilience as a

8 personal trait or outcome have been criticized in recent research as this does not recognize the

9 critical role of one's environment and available resources (17,23).

10 In more contemporary and holistic conceptions, "resilience has come to be seen less in

11 terms of static characteristics within the individual and more as a dynamic and multi-faceted

12 family of processes that evolve over time" (p. 234) (24). To illustrate, resilience has been

13 conceptualized as a dynamic process, involving one's personal characteristics, environment, and

14 support networks, that influence how an individual "bounces back" from challenging

15 circumstances (e.g., onset of mental illness) (16–18,25). This also acknowledges the integral role

16 of not only the individual, but the social and ecological systems that influence resilience (26,27).

17 For example, Wathen and colleagues (2012) offer the following definition further contextualized

18 to the field of trauma and mental health: "Resilience is a dynamic process in which

19 psychological, social, environmental and biological factors interact to enable an individual at any

20 stage of life to develop, maintain, or regain their mental health despite exposure to adversity" (p.

21 10) (28). Through this lens, resilience is seen as fluid (rather than a fixed or pre-determined

22 trait), arising through multiple pathways that lead to positive indices of flourishing and

23 functioning (29). Taken together, processes of resilience are shaped by the complex interplay

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1 between individual experiences of stress / adversity, multimodal "*resilience factors*" (e.g., risks,

2 internal and external protective factors, self-regulatory strategies), as well as one's adaptation

3 and other resilience-related outcomes (25,30).

4   This process-oriented perspective of resilience has gained increased attention in mental

5 health and rehabilitation sciences research over the past two decades (19,29), and has aligned

6 with the paradigm shift towards recovery models of mental health and the growing popularity

7 and application of positive psychology principles in psychiatry (31). Indeed, resilience research

8 and recovery models of mental health share an orientation towards understanding the processes

9 that underly individual experiences (embedded within one's sociocultural context / environment)

10 and emphasize the importance of hope, meaning, engagement, and life satisfaction in one's

11 recovery (32–34). Recent conceptual models (35) and interventions (36,37) focused on youth-

12 specific and integrated mental health services also highlight resilience as an important aspect to

13 the recovery process. Additionally, adopting a resilience perspective aligns with more strengths-

14 based and transdiagnostic approaches which aim to better understand processes of recovery

15 relevant to a broader range of adolescent and young adult mental health service users (38).

16 Researchers have begun to uncover resilience factors across and beyond specific diagnoses,

17 which can be targeted in interventions to promote positive development, functioning, and well-

18 being (26,29,30,39). As such, the study of resilience among transition-age youth with SMI can

19 inform developments in recovery-oriented approaches to service delivery and warrants further

20 exploration.

21   In sum, emerging evidence and frameworks of resilience provide a unique lens to

22 understanding mental health among transition-age youth, with the capacity to recognize

23 individuals' strengths, and move beyond the common focus on illness, deficits and problems in

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1 rehabilitation sciences (35). However, researchers have not yet developed a theoretical

2 framework or model of resilience tailored to the unique experiences of transition-age youth who

3 are diagnosed with SMI to guide research and practice (19). In addition, conceptualizations of

4 resilience vary across the scientific literature, which directly impacts how the concept of

5 resilience is understood, operationalized and applied within this context. This is important to

6 address as discrepancies across definitions of resilience may limit measurement, study

7 comparisons, and current understandings of resiliency-informed care approaches in research and

8 clinical practice (23). A comprehensive synthesis of existing evidence will enhance conceptual

9 clarity in this area, identify factors and outcomes that are relevant to transition-age youth's

10 resilience, and inform future work.

11 **Objectives**

12   The overarching purpose of the present scoping review is to synthesize and describe the

13 breadth of scientific literature on resilience among transition-age youth diagnosed with SMI,

14 identify current knowledge gaps, and recommend key areas for future resilience research among

15 this population. Specifically, this scoping review will explore how the concept of resilience has

16 been conceptualized and operationalized in the transition-age youth mental health literature, and

17 identify resilience factors and outcomes that have been studied within the context of transition-

18 age youth's mental health recovery (e.g., adversity, risks, internal and external protective factors,

19 self-regulatory strategies, adaptation and resilience-related outcomes). The focus of this review

20 will be on conceptualizations of resilience from a process-oriented perspective (rather than as a

21 personal trait or outcome).

22   **Methods and Analysis**

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1   A scoping review design was selected based on the exploratory nature of the proposed

2   research question and the current focus on clarifying the concept of resilience. Particularly, a

3   scoping review design allows for a comprehensive summary of knowledge, inclusive of more

4   broad study objectives and methodologies, and is thus recommended for gaining conceptual

5   clarity and identifying key knowledge gaps (40,41).

6   The scoping review protocol will follow the methodological stages outlined by Arksey

7   and O'Malley (2005), and extended by Levac and colleagues (2010), including: i) identifying the

8   research question, ii) identifying relevant studies, iii) study selection, iv) charting the data, v)

9   collating, summarizing, and reporting the results, and vi) stakeholder consultation (42,43).

10   Throughout the review process, an iterative and reflexive approach will be used in order to refine

11   the initial protocol as needed in consultation with a community stakeholder group (involving

12   researchers, clinicians, and transition-age youth with SMI) (42,43). Recent guidance documents

13   (44) and best practices for conducting and reporting scoping reviews (PRISMA-ScR) (45) will

14   also be applied to promote methodological rigor and transparency. The PRISMA-P checklist (46)

15   can be found in Appendix A (online supplementary). The current protocol has been registered

16   through Open Science Framework (https://osf.io/rzfc5), and will be conducted over a one-year

17   timeframe (December 2021 to November 2022).

Stage 1: Identifying the Research Question

19   This scoping review aims to explore the extent and breadth of the current scientific

20   literature on resilience among transition-age youth diagnosed with SMI. Specifically, the review

21   will address two research questions: (1) How has resilience been conceptualized and

22   operationalized (i.e., defined and measured) in the transition-age youth mental health literature?

23   (2) What factors influence resilience among transition-age youth with SMI, and what outcomes

9

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1 have been studied within the context of transition-age youth's mental health recovery? The

2 research questions have been broadly framed using the PCC mnemonic to address the *population*

3 of transition-age youth diagnosed with SMI and the *concept* of resilience within any *context* of

4 one's mental health recovery (41). Each component is further clarified below, in accordance with

5 the Joanna Briggs Institute scoping review manual (44).

6 *Population*. For the present review, the population is defined as "transition-age youth",

7 including adolescents and young adults between the ages of 16 and 29 years old, who are

8 entering adulthood and have been diagnosed with SMI. It is important to note that definitions of

9 "youth", "adolescents", and "young adults" differ across various cultures and settings, and are

10 thus highly mixed within the scholarly literature. In order to be inclusive of the most common

11 European/United Nations/WHO definitions of this age group and reflective of current mental

12 health service models, the present review will include studies with participants spanning middle

13 adolescence (age 15) to the "upper limit" of young adulthood (age 36) if the target population is

14 clearly defined as "transition-age youth" (3,14,47–50). Additionally, serious mental illness

15 (SMI) is defined as "a mental, behavioral, or emotional disorder resulting in serious functional

16 impairment, which substantially interferes with or limits one or more major life activities", such

17 as one's interpersonal relationships, self-care, employment, or recreation (51,52). Definitions of

18 SMI exclude dementias, developmental disorders, and substance use disorders, as well as mental

19 disorders due to a general medical condition (52). Examples of mental health conditions that may

20 meet criteria for SMI include: major depressive disorders, bipolar disorders, borderline

21 personality disorder, anxiety disorders, eating disorders and schizophrenia spectrum disorders

22 (51,52). Among youth and adolescents (under age 18) the same definition and examples are

23 applied but also occasionally termed "serious emotional disturbance" (SED), rather than SMI

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1 (52,53). Studies with participants experiencing co-morbid disorders which are not the primary

2 focus will also be included in this scoping review.

3   *Concept.* While definitions of resilience vary across different research disciplines, most

4 definitions refer to positive adaptation in the face of significant challenge, risk or adversity as

5 central or defining features, and acknowledge the importance of sociocultural factors in shaping

6 experiences and understandings of resilience (19). For the purpose of this scoping review,

7 resilience is defined as a dynamic process that unfolds over time, involving multiple resilience

8 factors that interact to enable individuals to negotiate or recover from stressful life events /

9 adversity (e.g., one's personal characteristics, environment and support networks). Studies that

10 adopt this process-oriented perspective will be included, and the following core elements of

11 resilience and resilience factors will be explored: adversity, risks, internal and external protective

12 factors, self-regulatory strategies, adaptation and resilience-related outcomes (25,30). Studies

13 that focus solely on a trait perspective of resilience, similar constructs (e.g., ego-resilience,

14 psychological capital) or biological / genetic / neurophysiological factors will be omitted. Lastly,

15 given our focus on psychological resilience at the person- or individual-level, studies evaluating

16 family- or community-level resilience will not be included.

17   *Context.* While "clinical recovery" is often defined as a reduction in SMI symptoms or

18 impairment (typically in clinical / health care settings), "personal recovery" refers to the

19 processes that contribute to transition-age youth's hope, development, and engagement in

20 meaningful activities (even while facing SMI) and emphasizes the importance of multiple

21 contexts where this occurs (e.g., spanning personal, familial, social and institutional

22 environments) (35). The present review considers mental health recovery primarily through a

23 personal recovery lens, and will thus explore transition-age youth's resilience in any context of

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1 their mental health recovery, which may include individual, community, and health-oriented

2 settings (among others).

Stage 2: Identifying Relevant Literature

4 *Information source.* To comprehensively review the existing evidence and knowledge

5 base related to resilience in the field of transition-age youth mental health, empirical sources will

6 be considered, including original research / primary studies. Specifically, six electronic databases

7 of value to the fields of psychology, health and rehabilitation sciences will be searched to

8 identify relevant empirical studies: MEDLINE (Ovid), EMBASE (Ovid), PsycINFO, AMED,

9 CINAHL, and Scopus. To enhance the comprehensiveness of the search, relevant journals and

10 the reference list of included sources and similar reviews will be manually searched.

11 *Search strategy.* The search terms and search strategy will be developed by the

12 multidisciplinary review team, in consultation with a health sciences librarian at the University

13 of Toronto. Importantly, keywords have been carefully selected to best capture the complex and

14 evolving terminology used to describe the population and concept reflected in our research

15 question. As mentioned, terms to describe the age group of transition-age youth are highly

16 variable and inconsistent within the literature (e.g., subject headings / keywords may be inclusive

17 of youth / teenagers / adolescents / emerging adults / adults etc.). Clinical and lay language to

18 describe SMI diagnoses have also evolved over time, with "severe and persistent mental illness"

19 and "chronic mental illness" often cited (52). Further, as reflected in the research aims, there is

20 currently no consensus on the definition of resilience and conceptualizations differ based on the

21 context or academic discipline applied (19). To overcome these challenges in the development

22 and execution of our search, we will utilize the following techniques: i) a multi-step search

23 process to ensure relevant sources are not missed (an initial limited search strategy favoring

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1 sensitivity over precision will be conducted first and inform potential revisions making the

2 search strategy more precise); ii) use of Yale MeSH analyzer for piloting; and iii) ongoing expert

3 consultation. Additionally, the search strategy will undergo peer review to enhance its feasibility

4 and rigor (e.g., CADTH Peer Review Checklist for Search Strategies) (54).

5 The preliminary search strategy and list of keywords have been developed using

6 MEDLINE (Ovid) and adapted to each database (see Appendix B online supplementary). The

7 search strategy will explore specified search terms within subject headings, titles, abstracts and

8 keywords. Search terms will be combined using appropriate Boolean logic and operators (e.g.,

9 'and', 'or', 'not').

Stage 3: Study Selection

11 Study selection will follow a collaborative and iterative screening process among the

12 review team using Covidence systematic review software (55) and pre-determined eligibility

13 criteria (42,43). All search results will be exported to Covidence for data management and to

14 remove duplicates. At least two independent reviewers (authors AN and MD) will complete

15 screening in two stages for i) title/abstract and ii) full-text review. The reviewers will complete a

16 calibration exercise using a sample of 10 references to pilot inclusion / exclusion criteria and

17 compare decisions (e.g., include / exclude / uncertain). Formal title/abstract screening will

18 commence when 80% agreement is achieved and will involve regular meetings among reviewers

19 to discuss any challenges or uncertainties. Upon completion of stage 1, full-text references will

20 be obtained and independently screened by the same two reviewers. The same strategy will be

21 applied to stage 2 full-text screening, including piloting (calibration exercise for 10 references)

22 and regular discussion. At each stage, reviewer (inter-rater) agreement will be reported.

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1 Disagreements will be resolved by consensus or by the decision of a third reviewer (senior

2 authors EN and CS).

3   Included sources will address the population of transition-age youth diagnosed with SMI,

4 the concept of resilience (in any context), and will contain original peer reviewed research

5 written in English. Specific language restrictions were made for feasibility purposes.

6 Additionally, the publishing date was limited to the years 2000 to 2022 as this is the time period

7 where a significant rise in resilience research emerged within mental health and rehabilitation

8 sciences (19,29,56). The prioritisation, implementation and evaluation of mental health services

9 specifically tailored to transition-age youth (e.g., early intervention programs) also mainly took

10 root after the year 2000 (13,47,57). Further inclusion / exclusion criteria for the two-stage

11 screening are detailed below.

12 ***Eligibility for Stage 1 Title/Abstract Review:***

13   ***Inclusion criteria.*** a) Population: Refers to transition-age youth diagnosed or living with

14 SMI (as defined previously). b) Concept: Resilience / resiliency is identified as a key focus

15 within the purpose / objectives / research question, outcome measure, and/or findings. c)

16 Context: Is set in any individual, community or health-oriented context of mental health

17 recovery. d) Type of source: Peer reviewed original research (quantitative, qualitative, mixed

18 method). e) Publication language / date: Written in English and published between 2000 and

19 2022.

20   ***Exclusion criteria.*** a) Population: Refers to non-clinical population, general population,

21 children / youth (age 0-14), or childhood developmental disorder. b) Concept: Resilience /

22 resiliency is not an explicit focus. c) Type of source: Peer reviewed articles with the primary aim

23 of developing, reporting or validating the psychometric properties of survey measures /

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1 instruments, study protocols, review articles (e.g., systematic/scoping reviews, meta-analyses),

2 books / book chapters, and grey literature (e.g., editorials, commentaries / reports, clinical

3 guidelines, conference proceedings, and theses / dissertations). d) Publication language / date:

4 Written in another language than English and published before January 1, 2000.

5 *Eligibility for Stage 2 Full-text Review:*

6 *Inclusion criteria.* a) Population: Clearly defined clinical population in accordance with

7 either: participant self-reported history of SMI; clinician confirmed diagnosis of SMI; or DSM-V

8 / ICD-10 system diagnostic criteria. b) Concept: Must explicitly define / operationalize the

9 concept of resilience from a process-oriented perspective and focus on individual-level

10 resilience.

11 *Exclusion criteria.* a) Population: Mixed samples whereby transition-age youth with SMI

12 are encompassed within broader age groups or the general population (without the stratification

13 of results / reporting). b) Concept: Trait resilience, other psychological constructs that are similar

14 or connected to resilience / resiliency (e.g., psychological capital, hardiness, grit, general indices

15 of subjective well-being), family- or community-level resilience, or biological / genetic /

16 neurophysiological factors are identified as the sole / primary focus or outcome.

17 While criteria were developed to maintain a broad scope of selected studies, our hope is

18 that stringent inclusion / exclusion criteria will eliminate sources that only include the concept of

19 resilience as an opinion, recommendation, vague interpretation, or buzzword – as this will not

20 aid in enhancing conceptual clarity in this research area. As such, these broad eligibility criteria

21 may undergo further refinement to ensure that selected sources capture the full breadth of

22 knowledge available related to resilience among young people with SMI.

23 **Stage 4: Data Extraction**

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1 Following recommended data charting methods (42,43), a standardized and systematic

2 charting form (Table 1) will be used to organize and interpret relevant details from the selected

3 sources in line with our research question and objectives. The following information will be

4 charted in Excel: i) general document details, ii) key characteristics of empirical studies (e.g.,

5 research design, methods, intervention details, youth engagement, intersectional approaches,

6 study population, context), iii) how resilience was conceptualized and operationalized (e.g.,

7 definition, theoretical framework / model, academic discipline, measures), and iv) resilience

8 factors and outcomes identified.

9 The preliminary chart form was also developed in accordance with Greenhalgh and

10 colleagues' (2005) meta-narrative approach (58). Specifically, this meta-narrative approach was

11 originally created to detail how a field of study or key concept has evolved over time and to

12 explore potential tensions that exist across research traditions (or "paradigms") within

13 knowledge syntheses (58). A meta-narrative approach is recommended when examining

14 complex, heterogeneous bodies of literature where a key concept of interest has been

15 conceptualized and investigated through different research traditions, and conceptual clarity is

16 needed (58). According to Greenhalgh et al. (2005), a *research tradition* refers to a paradigm of

17 inquiry, undertaken by researchers, that shares four key interrelated dimensions (conceptual,

18 theoretical, methodological, instrumental), and thus shows distinct disciplinary roots, scope and

19 key concepts (58). Research traditions are often characterized and influenced by seminal

20 conceptual papers that inform the direction and focus of future work (58). Alternatively, an

21 *academic discipline* is defined as a broader field of study or branch of knowledge (e.g.,

22 sociology, psychology, medicine) (58).

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1   Data extraction will be a collaborative and iterative process among the review team to

2   ensure that key characteristics, definitions, themes and strengths/limitations are captured. A

3   calibration exercise using a sample of 5 studies will be completed by two reviewers to pilot the

4   chart form. When agreement of at least 80% is achieved, the two independent reviewers (authors

5   AN and MD) will complete the remaining formal data charting procedures for all references. The

6   charting form will be revised as needed based on stakeholder feedback. Consensus will be

7   reached through discussion or final decision by a third reviewer (senior authors EN and CS) if

8   necessary. Any challenges in the organization / categorization of data at this stage will be

9   brought to the four content experts on this protocol (CS, SB, NK, EN), each of whom have over

10   10 years of research and/or clinical experience in young adult mental health and resiliency.

11   *Table 1. Draft charting form*

General document details	
APA citation	Full author, date and journal details.
Country and location	Country of publication (and location if provided).
Study characteristics	
Study purpose	Purpose, research question(s), aim(s), and/or objective(s) of the study.
Study population and sample size	Age range, SMI (clinical diagnosis / self-reported; stage of illness), relevant demographic characteristics. Number of participants.
Study design and methods	Quantitative, qualitative, or mixed methods. Main experimental, observational or qualitative methods used.
	Intervention (if applicable): Description of key characteristics (e.g., intervention purpose / target, type, main components, duration)
	Youth engagement (if applicable): Extent to which youth with SMI were engaged through aspects of the research process.
	Intersectional approaches (if applicable): Description of recruitment procedures, theoretical frameworks, and analyses addressing diversity and intersecting social identities of participants.
Context	The setting of the research if provided (e.g., community, health-oriented, specific treatment / program).
Conceptualization and operationalization of resilience	

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Conceptualization	How was resilience described from a process-oriented perspective?
Definition of resilience	Definition or operationalization of resilience.
Theoretical framework/model	Theory, conceptual model(s) or framework(s) applied.
Seminal papers referenced	Overarching paradigm and seminal conceptual papers that have informed the research (if applicable).
Instruments used to measure resilience	Specific measures / surveys employed (if applicable).
Academic discipline	Broad field of research or practice.
Resilience factors and outcomes	
Adversity / risks	Personal or environmental risk factors identified (if applicable).
Internal / external protective factors	Personal or environmental protective factors identified (if applicable).
Self-regulatory strategies	Strategies identified to self-manage mood, emotions, thoughts, and/or behaviors (if applicable).
Study outcomes	Any outcomes that were measured or described. Description of positive change, resilience-related outcomes, or adaptation (if applicable).
Important results	Description of main findings and implications.

1

2 **Stage 5: Collating, Summarizing, and Reporting the Results**

3   The PRISMA-ScR Checklist will guide the presentation of results in the final report (45).

4 This will include a flow diagram to explicitly detail review decision making processes (45). Data

5 from eligible full-texts will be analyzed and collated using meta-narrative and qualitative content

6 analyses as well as descriptive statistics (e.g., frequencies / counts). Results of this scoping

7 review will be summarized narratively in a descriptive overview (42,43).

8   Qualitative content analysis will be used to identify, analyze, and report patterns across

9 the included empirical sources to understand how resilience has been conceptualized and

10 operationalized among transition-age youth with SMI. Particularly, definitions, measures,

11 resilience factors and outcomes will be open-coded, and then grouped to generate distinct

12 categories. Aspects of the study population and context of mental health recovery may also be

13 analyzed. The inductive and reflexive coding process will be completed by two reviewers

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1   (authors AN and MD) using Nvivo software. Categories will then be reviewed and discussed

2   with all members of the multidisciplinary review team (CS, SB, NK, EN) for further refinement.

3   As guided by Greenhalgh et al. (2005) for meta-narrative review, findings will be organized and

4   synthesized to map conceptualizations of resilience over time and across different research

5   traditions (58). Research traditions will be identified through a process of grouping articles that

6   reflect similar theoretical, methodological and/or instrumental approaches (e.g., seminal papers

7   cited, how the authors frame the concept of resilience within the study outcomes or

8   implications). This will allow for easier interpretation of the extent and breadth of the current

9   literature on resilience among transition-age youth diagnosed with SMI. Particularly,

10   comparisons and tensions across definitions of resilience may be highlighted according to each

11   paradigm.

12   Reflexivity will support methodological rigor and transparency by explicitly

13   acknowledging how the researchers' positionality may influence the motivations and

14   methodological choices that ultimately shape the review process, interpretations, and results (59–

15   61). Ongoing reflexive practice will be used to address and challenge researcher biases,

16   assumptions, and preunderstandings that may influence study decisions and analyses, and to

17   critically analyze positions of privilege and power in research activities. Detailed notes of our

18   decision-making processes and justifications will be documented throughout all stages of the

19   scoping review.

20   For the purpose of the present scoping review, we will use a combination of narrative,

21   tabular, and graphical summaries to present key findings (42,43). A traditional summary chart

22   will describe key characteristics of each included source (e.g., author and year of publication,

23   research tradition, academic discipline, study design, study population, definitions of resilience,

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1   measures, main findings). Resilience factors and outcomes will be summarized in a table or

2   figure. A creative graphical / visual depiction of identified research traditions and timeframe will

3   also be used to "map" key findings of the review (58). In sum, the analytic approach has been

4   developed to facilitate conceptual / theoretical advancements in resilience research, identify key

5   knowledge gaps, and highlight potential future directions in the study of transition-age youth

6   resilience and mental health. The presentation and reporting of results (through summaries,

7   tables, and visuals) will be discussed among the multidisciplinary review team and community

8   stakeholder group. Consistent input from the perspective of researchers, clinicians, and

9   transition-age youth with SMI will enhance the relevance and utility of the review findings.

10 **Stage 6: Stakeholder Consultation**

11   The overarching goal of the current scoping review is to systematically explore the

12 current extent and breadth of peer reviewed research on resilience among transition-age youth

13 diagnosed with SMI. Particularly, efforts have been made within the scoping review

14 methodology to provide a holistic and coherent overview of evidence that can inform future

15 research, education, and practice (41–43). In order to achieve these goals, the multidisciplinary

16 review team has been formed to include knowledgeable stakeholders (researchers, clinicians,

17 knowledge users) with backgrounds in psychiatry / early intervention services (NK),

18 occupational therapy / resiliency in rehabilitation sciences (AN, SB, EN), and kinesiology /

19 young adult mental health programming (MD, CS).

20   Following Levac and colleagues' (2010) recommendations, this scoping review will also

21 consult with community stakeholders to gain the perspectives of transition-age youth with lived

22 experience of SMI, clinicians, and other mental health / resiliency researchers (43). To achieve

23 Stage 6 of this review, qualitative focus groups will be conducted virtually (using online

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1 teleconferencing). Community stakeholders will be invited through the review team's current

2 research / practice networks and established partnerships with youth-focused mental health

3 services in Canada. Recruitment materials (emails, e-posters) will share details regarding

4 eligibility, focus group participation, and the letter of informed consent form. Interested

5 participants will provide written informed consent by digitally signing a secure online consent

6 form on the University of Toronto's Research Electronic Data Capture (REDCap) platform.

7 Consultative meetings will be held at two time points to inform: i) the research methods

8 (Topic Consultation and Input Meeting), and ii) interpretation, reporting and knowledge

9 translation strategies (Reaction Meeting). Following current recommendations for stakeholder

10 consultation (43,62,63) and focus group studies (64,65), up to 3 focus groups (n = 6-10

11 participants each) will be conducted at each time point. For the Topic Consultation and Input

12 Meeting, community stakeholders will be asked about their perspectives of the review objectives

13 and methods, key areas of focus for data extraction and analysis (e.g., important aspects of

14 transition-age youth resilience to capture within the charting form), and what they would most

15 like to learn from the results of the scoping review. At the time of the Reaction Meeting,

16 community stakeholders will be asked about their impression of key review findings (e.g., how

17 resilience has been defined), whether this resonates with them/their experiences, where

18 gaps/tensions exist that require further investigation, and how this knowledge can be applied to

19 support mental health recovery. This will shape how results are presented and interpreted in the

20 final scoping review paper and guide decision making on knowledge dissemination strategies.

21 We will aim for equal representation among the researchers, clinicians, and young people

22 involved in each focus group. The consent form and group norms will be reviewed with

23 participants at the start of each focus group discussion. Focus groups will be co-facilitated by

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1 two members of the review team (AN, MD) virtually using a semi-structured interview guide.

2 Audio recordings will be transcribed verbatim to complete directed content analysis (66).

3 Complete methods and results will be detailed in the final report (including stakeholder group

4 characteristics, sample size, data collection tools, analysis, and findings) (43). Several

5 recommendations to enhance the trustworthiness of qualitative content analysis will be employed

6 (67,68), including: (i) member checking, (ii) clear description of the context and participant

7 characteristics, (iii) transparent reporting of the coding process and agreement, and (iv) use of

8 illustrative quotes, as well as frequencies / counts where appropriate, to summarize results.

9 Guided by scoping review practices, stakeholder engagement will promote a more

10 collaborative approach, emphasize the voices of young people and knowledge users, and

11 ultimately maximize the potential contribution of the research (43). Particularly, involving

12 transition-age youth with SMI as part of the review process will facilitate feedback on the

13 relevance and usefulness of the review findings. This is considered essential for not only

14 advancing research and practice in youth mental health, but also addressing recent concerns of

15 the "weaponization" of resiliency in rehabilitation (e.g., adding stress, pressure, or individual

16 onus to "become resilient" at times of increased vulnerability) by drawing on the values and

17 perspectives of young people (69–71).

Patient and Public Involvement

19 Patients and members of the public have not been involved in the design of this scoping

20 review and the protocol development. However, the perspectives of transition-age youth who

21 have experienced SMI will be gathered during the review process. Their feedback will inform

22 our methods, interpretation of results, and knowledge dissemination plan.

23 **Ethics and Dissemination**

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1   This scoping review study received institutional research ethics board approval to

2   conduct the community stakeholder input and reaction meetings (stage 6), which involve

3   collection and analysis of primary data. Results of the review will be disseminated through

4   traditional approaches, including open-access peer-reviewed publication(s), presentations at 1-2

5   national/international conferences, and a plain-language summary report. Additional knowledge

6   translation strategies may be used dependent on community stakeholder feedback to share

7   findings, key messages and future directions (e.g., infographics, social media).

Conclusion

9   The distinct impact and burden of SMI among young people has been increasingly

10   recognized among researchers and clinicians. This has provoked new research and care

11   approaches centered on building resiliency. Despite a recent surge in examinations of resilience

12   in the context of transition-age youth mental health recovery, there remains a lack of

13   understanding on the core meanings, processes and outcomes of resilience among this

14   population. To our knowledge, this will be the first scoping review to systematically examine

15   how resilience is conceptualized and operationalized among transition-age youth with SMI, and

16   explore what resilience factors and outcomes have been studied. A comprehensive synthesis,

17   developed in collaboration with community stakeholders, is needed to advance research and

18   clinical practice.

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1 **Contributorship Statement:** AN led the conceptualization of this review and drafted the

2 protocol manuscript with support from CS, MD, SB, NK, and EN. MD was involved in the

3 review design and refining the search strategy. CS, SB, NK, and EN were also involved in the

4 review design, and the development of the eligibility criteria and data extraction forms. All

5 authors provided feedback on the manuscript and approval for submitting this protocol

6 manuscript for publication.

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Appendix A

PRISMA-P Checklist

		Reporting Item	Page Number
Title			
Identification	#1a	Identify the report as a protocol of a systematic review	2
Update	#1b	If the protocol is for an update of a previous systematic review, identify as such	N/A
Registration			
	#2	If registered, provide the name of the registry (such as PROSPERO) and registration number	2, 8
Authors			
Contact	#3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	1
Contribution	#3b	Describe contributions of protocol authors and identify the guarantor of the review	1, 23
Amendments			
	#4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	N/A
Support			
Sources	#5a	Indicate sources of financial or other support for the review	--
Sponsor	#5b	Provide name for the review funder and / or sponsor	--
Role of sponsor or funder	#5c	Describe roles of funder(s), sponsor(s), and / or institution(s), if any, in developing the protocol	--
Introduction			
Rationale	#6	Describe the rationale for the review in the context of what is already known	4-7
Objectives	#7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	8-10
Methods			
Eligibility criteria	#8	Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review	11-14

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Information sources	[#9](#9)	Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage	11-12
Search strategy	[#10](#10)	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	Appendix B
Study records - data management	[#11a](#11a)	Describe the mechanism(s) that will be used to manage records and data throughout the review	12
Study records - selection process	[#11b](#11b)	State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis)	12-14
Study records - data collection process	[#11c](#11c)	Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	15-17
Data items	[#12](#12)	List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications	15-17
Outcomes and prioritization	[#13](#13)	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	15-17
Risk of bias in individual studies	[#14](#14)	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	See note 1
Data synthesis	[#15a](#15a)	Describe criteria under which study data will be quantitatively synthesised	17-18
Data synthesis	[#15b](#15b)	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data and methods of combining data from studies, including any planned exploration of consistency (such as I2, Kendall's τ)	N/A
Data synthesis	[#15c](#15c)	Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression)	N/A
Data synthesis	[#15d](#15d)	If quantitative synthesis is not appropriate, describe the type of summary planned	17-18

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| Meta-bias(es) | #16 | Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies) | See note 2 |
| Confidence in cumulative evidence | #17 | Describe how the strength of the body of evidence will be assessed (such as GRADE) | See note 3 |

Author notes

1. N/A for scoping reviews
2. N/A for scoping reviews
3. N/A for scoping reviews

Citation: Moher D, Shamseer L, Clarke M, Ghersi D, Liberati A, Petticrew M, Shekelle P, Stewart LA. Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) 2015 statement. Syst Rev. 2015;4(1):1.

The PRISMA-P elaboration and explanation paper is distributed under the terms of the Creative Commons Attribution License CC-BY. This checklist can be completed online using https://www.goodreports.org/, a tool made by the EQUATOR Network in collaboration with Penelope.ai

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SCOPING REVIEW PROTOCOL

Appendix B

Medline Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-Medline
1	Population (Transition-age youth)	exp Adolescent/ or exp Young Adult/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,kf.
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Anxiety Disorders/ or exp "Bipolar and Related Disorders"/ or exp Dissociative Disorders/ or exp "Feeding and Eating Disorders"/ or exp Mood Disorders/ or exp "Attention Deficit and Disruptive Behavior Disorders"/ or exp Personality Disorders/ or exp Schizophrenia/ or exp Psychotic Disorders/ or exp Affective Disorders, Psychotic/ or exp Capgras Syndrome/ or exp Delusional Parasitosis/ or exp Morgellons Disease/ or exp Paranoid Disorders/ or exp Somatoform Disorders/ or exp "Trauma and Stressor Related Disorders"/ or exp Mentally Ill Persons/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,kf.
5	Concept (Resilience)	exp Resilience, Psychological/
6	Concept (Resilience)	(resilienc*).tw,kf.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

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SCOPING REVIEW PROTOCOL

Embase Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-Embase
1	Population (Transition-age youth)	exp Adolescent/ or exp Young Adult/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,kf.
3	Population (Serious mental illness)	exp Mental Disease/ or exp Anxiety Disorder/ or exp Bipolar Disorder/ or exp Dissociative Disorder/ or exp Eating Disorder/ or exp Emotional Disorder/ or exp Mood Disorder/ or exp Attention Deficit Disorder/ or exp Impulse Control Disorder/ or exp Neurosis/ or exp Personality Disorder/ or exp Schizophrenia Spectrum Disorder/ or exp Schizophrenia/ or exp Psychosis/ or exp Somatoform Disorder/ or exp Posttraumatic Stress Disorder/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,kf.
5	Concept (Resilience)	exp Psychological Resilience/
6	Concept (Resilience)	(resilienc*).tw,kf.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

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SCOPING REVIEW PROTOCOL

PsychINFO Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-PsychINFO
1	Population (Transition-age youth)	exp Emerging Adulthood/ or exp Early Adolescence/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw.
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Chronic Mental Illness or exp Serious Mental Illness/ or exp Affective Disorders or exp Anxiety Disorders/ or exp Attention Deficit Disorder/ or exp Bipolar Disorder/ or exp Dissociative Disorders/ or exp Disruptive Behavior Disorders/ or exp Eating Disorders/ or exp Personality Disorders/ or exp Psychosis/ or exp Schizophrenia/ or exp Somatoform Disorders/ or exp "Stress and Trauma Related Disorders"/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw.
5	Concept (Resilience)	exp "Resilience (Psychological)"/
6	Concept (Resilience)	(resilienc*).tw.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

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SCOPING REVIEW PROTOCOL

AMED Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-AMED
1	Population (Transition-age youth)	exp Adolescent/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,et.
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Adjustment Disorders/ or exp Affective Disorders/ or exp Affective Disorders Psychotic/ or exp Bipolar Disorder/ or exp Manic Disorder/ or exp Depressive Disorder/ or exp Mood Disorders/ or exp Anxiety Disorders/ or exp Obsessive Compulsive Disorder/ or exp Phobic Disorders/ or exp Stress Disorders Post Traumatic/ or exp Attention Deficit Disorder with Hyperactivity or exp Child Behavior Disorders/ or exp Dissociative Disorders/ or exp Multiple Personality Disorder/ or exp Eating Disorders/ or exp Anorexia Nervosa/ or exp Bulimia/ or exp Neurotic Disorders/ or exp Personality Disorders/ or exp Borderline Personality Disorder/ or exp Hysteria/ or exp Psychotic Disorders/ or exp Schizophrenia/ or exp Somatoform Disorders/ or exp Conversion Disorder/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,et.
5	Concept (Resilience)	exp Adaptation Psychological/
6	Concept (Resilience)	(resilienc*).tw,et.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english and yr="2000 -Current")

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SCOPING REVIEW PROTOCOL

CINHAL Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into CINHAL (EBSCO)
1	Population (Transition-age youth)	(MH "Adolescence+") OR (MH "Young Adult")
2	Population (Transition-age youth)	TI (youth* or "transition age youth*" or teen* or adolescen* or "emerging adult*" or "young adult*" or "early adult*" or "young person*" or "young people*" or juvenile*) OR AB (youth* or "transition age youth*" or teen* or adolescen* or "emerging adult*" or "young adult*" or "early adult*" or "young person*" or "young people*" or juvenile*)
3	Population (Serious mental illness)	(MH "Mental Disorders+") or (MH "Mental Disorders, Chronic") or (MH "Neurotic Disorders+") or (MH "Affective Disorders+") or (MH "Seasonal Affective Disorder") or (MH "Depression+") or (MH "Anxiety Disorders+") or (MH "Social Anxiety Disorders") or (MH "Generalized Anxiety Disorder") or (MH "Panic Disorder") or (MH "Obsessive-Compulsive Disorder+") or (MH "Phobic Disorders+") or (MH " Stress Disorders, Post-Traumatic+") or (MH "Psychotic Disorders+") or (MH "Schizophrenia+") or (MH "Affective Disorders, Psychotic+") or (MH "Bipolar Disorders+") or (MH "Dissociative Disorders+") or (MH "Multiple-Personality Disorder") or (MH "Personality Disorders+") or (MH "Adjustment Disorders+") or (MH "Attention Deficit Hyperactivity Disorder") or (MH "Child Behavior Disorders+") or (MH "Eating Disorders+") or (MH "Binge Eating Disorder") or (MH "Avoidant Restrictive Food Intake Disorder") or (MH "Bulimia Nervosa") or (MH "Bulimia") or (MH "Anorexia Nervosa") or (MH "Anorexia") or (MH "Somatoform Disorders+") or (MH "Body Dysmorphic Disorder")
4	Population (Serious mental illness)	TI ("mental disorder*" or "mental illness*" or "psychiatric disabilit*" or "psychiatric disorder*" or "psychiatric diagnosis*" or "serious emotional disturbance*" or "severe emotional disturbance*" or "mental health condition*" or "anxiety disorder*" or phobia* or "phobic disorder*" or "panic disorder*" or "obsessive-compulsive disorder*" or OCD or "bipolar disorder*" or "manic disorder*" or "manic depression" or "dissociative disorder*" or "multiple-personality disorder" or "eating disorder*" or anorexi* or bulimi* or "binge eating*" or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or "disordered eating" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "cyclothymic disorder*" or cyclothymia or "dysthymic disorder*" or dysthymia or "personality disorder*" or "schizophrenia spectrum disorder*" or schizophrenia or "psychotic disorder*" or psychosis or psychoses or "schizoaffective disorder*" or "psychotic affective disorder*" or "paranoid disorder*" or "somatoform disorder*" or "body dysmorphic disorder*" or "body dysmorphi*" or "post-traumatic stress disorder*" or "adjustment disorder*" or PTSD) OR AB ("mental disorder*" or "mental illness*" or "psychiatric disabilit*" or "psychiatric disorder*" or "psychiatric diagnosis*" or "serious emotional disturbance*" or "severe emotional disturbance*" or "mental health condition*" or "anxiety disorder*" or phobia* or "phobic disorder*" or

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SCOPING REVIEW PROTOCOL

		"panic disorder*" or "obsessive-compulsive disorder*" or OCD or "bipolar disorder*" or "manic disorder*" or "manic depression" or "dissociative disorder*" or "multiple-personality disorder" or "eating disorder*" or anorexi* or bulimi* or "binge eating*" or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or "disordered eating" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "cyclothymic disorder*" or cyclothymia or "dysthymic disorder*" or dysthymia or "personality disorder*" or "schizophrenia spectrum disorder*" or schizophrenia or "psychotic disorder*" or psychosis or psychoses or "schizoaffective disorder*" or "psychotic affective disorder*" or "paranoid disorder*" or "somatoform disorder*" or "body dysmorphic disorder*" or "body dysmorphi*" or "post-traumatic stress disorder*" or "adjustment disorder*" or PTSD)
5	Concept (Resilience)	(MH "Hardiness")
6	Concept (Resilience)	TI (resilienc*) OR AB (resilienc*)
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

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SCOPING REVIEW PROTOCOL

Scopus Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into Scopus
1	Population (Transition-age youth)	TITLE-ABS-KEY (youth* or "transition age youth*" or teen* or adolescen* or "emerging adult*" or "young adult*" or "early adult*" or "young person*" or "young people*" or juvenile*)
2	Population (Serious mental illness)	TITLE-ABS-KEY ("mental disorder*" or "mental illness*" or "psychiatric disabilit*" or "psychiatric disorder*" or "psychiatric diagnosis*" or "serious emotional disturbance*" or "severe emotional disturbance*" or "mental health condition*" or "anxiety disorder*" or phobia* or "phobic disorder*" or "panic disorder*" or "obsessive-compulsive disorder*" or OCD or "bipolar disorder*" or "manic disorder*" or "manic depression" or "dissociative disorder*" or "multiple-personality disorder" or "eating disorder*" or anorexi* or bulimi* or "binge eating*" or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or "disordered eating" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "cyclothymic disorder*" or cyclothymia or "dysthymic disorder*" or dysthymia or "personality disorder*" or "schizophrenia spectrum disorder*" or schizophrenia or "psychotic disorder*" or psychosis or psychoses or "schizoaffective disorder*" or "psychotic affective disorder*" or "paranoid disorder*" or "somatoform disorder*" or "body dysmorphic disorder*" or "body dysmorphi*" or "post-traumatic stress disorder*" or "adjustment disorder*" or PTSD)
3	Concept (Resilience)	TITLE-ABS-KEY (resilienc*)
4		1 and 2 and 3
5		limit 4 to (english language and yr="2000 - Current")

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Understanding resilience among transition-age youth with serious mental illness: Protocol for a scoping review

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Understanding resilience among transition-age youth with serious mental illness: Protocol

for a scoping review

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Word Count: 4959

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1 **Understanding resilience among transition-age youth with serious mental illness: Protocol**

2 **for a scoping review**

3 **Abstract**

4 **Introduction:** Transition-age youth (16-29 years old) are disproportionately affected by the

5 onset, impact and burden of serious mental illness (SMI; e.g., depression, bipolar disorder,

6 schizophrenia spectrum disorders). Emerging evidence has increasingly highlighted the concept

7 of resilience in mental health promotion and treatment approaches for this population. A

8 comprehensive synthesis of existing evidence is needed to enhance conceptual clarity in this

9 area, identify knowledge gaps, and inform future research and practice. As such, the present

10 scoping review is guided by the following questions: How has resilience been conceptualized

11 and operationalized in the transition-age youth mental health literature? What factors influence

12 resilience among transition-age youth with SMI, and what outcomes have been studied within

13 the context of transition-age youth's mental health recovery?

14 **Methods and analysis:** The present protocol will follow six key stages, in accordance with

15 Arksey and O'Malley's (2005) established scoping review methodology and recent iterations of

16 this framework, and has been registered with Open Science Framework (https://osf.io/rzfc5). The

17 protocol and review process will be carried out by a multidisciplinary team in consultation with

18 community stakeholders. A comprehensive search strategy will be conducted across multiple

19 electronic databases to identify relevant empirical literature. Included sources will address the

20 population of transition-age youth (16-29 years) diagnosed with SMI, the concept of resilience

21 (in any context), and will report original research written in English. Data screening and

22 extraction will be completed by at least two independent reviewers. Following meta-narrative

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1 review and qualitative content analyses, findings will be synthesized as a descriptive overview

2 with tabular and graphical summaries.

3 **Ethics and dissemination:** University of Toronto Health Sciences Research Ethics Board

4 approval was obtained to complete the community stakeholder consultation stage of this review.

5 Results will be disseminated through conference presentations, publications, and user-friendly

6 reports and graphics.

7

8 **Strengths and limitations of this study**

9 • This scoping review study will follow recent recommendations and guidance documents

10 to promote methodological rigor and has been registered to enhance transparency.

11 • Variability in how the population (transition-age youth) and concept (resilience) have

12 been defined, as well as restrictions to the search strategy based on language, date, and

13 publication type may limit the breadth of the search.

14 • An assessment of the methodological quality of included studies will not be conducted

15 which limits the types of conclusions and implications that can be drawn from the review.

16 • We will apply an iterative and team-based approach, in consultation with community

17 stakeholders (transition-age youth with SMI, clinicians, researchers) to improve the

18 applicability and dissemination of results.

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Introduction

Transition-age youth (16-29 years old) are the highest risk age group for onset of serious mental illness (SMI; mental illnesses that cause substantial functional impairment, e.g., depression, bipolar disorder, schizophrenia spectrum disorders), the single most disabling group of disorders worldwide (1,2). The experience of mental illness for young people is unique, in that it arises during a critical period of psychosocial development, identity formation, and many complex life transitions (3,4). Access to supportive treatment and relationships, social marginalization, and stigma continue to influence the course and severity of mental illness for transition-age youth (5). Indeed, SMI can negatively impact one's overall physical health, quality of life, and engagement in meaningful life roles and activities, including academics, employment, and social relationships (1,4,6,7). Further, the experience of chronic and persistent symptoms of mental illness can contribute to suicide risk, which is the second leading cause of death among individuals 15-29 years old globally (8,9). Despite the increased risk and burden of SMI among transition-age youth, this age group faces many barriers in accessing service and supports, as they transition out of youth services and into the adult mental health and addiction services sector (10,11). As such, the identification of factors that contribute to transition-age youth's mental health recovery and early intervention are now recognized as priority areas within national and global mental health strategies and guidelines (11–14).

Of particular interest, researchers and clinicians have emphasized the importance of promoting *resilience* in transition-age youth's mental health recovery. Most definitions of resilience refer to positive adaptation in the face of significant adversity as a central or defining feature. However, there are many different ways of conceptualizing resilience (e.g., as a trait, outcome, or dynamic process) (15,16), which has led to some ambiguity in how resilience is

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1 defined and understood across different research disciplines and perspectives (17,18). For

2 example, many authors have conceptualized and discussed resilience as an outcome resulting

3 from changes made at the individual level, or in relation to positive personal attributes (e.g.,

4 hope, self-efficacy, coping) (19,20). This aligns with early definitions of resilience as an

5 exceptional personal quality or trait, that an individual either has or does not have, which will

6 determine their capacity to both endure incredibly stressful life events and continue on a path

7 towards full functional and emotional recovery (15,21,22). Conceptualizations of resilience as a

8 personal trait or outcome have been criticized in recent research as this does not recognize the

9 critical role of one's environment and available resources (17,23).

10   In more contemporary and holistic conceptions, "resilience has come to be seen less in

11 terms of static characteristics within the individual and more as a dynamic and multi-faceted

12 family of processes that evolve over time" (p. 234) (24). To illustrate, resilience has been

13 conceptualized as a dynamic process, involving one's personal characteristics, environment, and

14 support networks, that influence how an individual "bounces back" from challenging

15 circumstances (e.g., onset of mental illness) (16–18,25). This also acknowledges the integral role

16 of not only the individual, but the social and ecological systems that influence resilience (26,27).

17 For example, Wathen and colleagues (2012) offer the following definition further contextualized

18 to the field of trauma and mental health: "Resilience is a dynamic process in which

19 psychological, social, environmental and biological factors interact to enable an individual at any

20 stage of life to develop, maintain, or regain their mental health despite exposure to adversity" (p.

21 10) (28). Through this lens, resilience is seen as fluid (rather than a fixed or pre-determined

22 trait), arising through multiple pathways that lead to positive indices of flourishing and

23 functioning (29). Taken together, processes of resilience are shaped by the complex interplay

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1   between individual experiences of stress / adversity, multimodal "*resilience factors*" (e.g., risks,

2   internal and external protective factors, self-regulatory strategies), as well as one's adaptation

3   and other resilience-related outcomes (25,30).

4   This process-oriented perspective of resilience has gained increased attention in mental

5   health and rehabilitation sciences research over the past two decades (19,29), and has aligned

6   with the paradigm shift towards recovery models of mental health and the growing popularity

7   and application of positive psychology principles in psychiatry (31). Indeed, resilience research

8   and recovery models of mental health share an orientation towards understanding the processes

9   that underly individual experiences (embedded within one's sociocultural context / environment)

10   and emphasize the importance of hope, meaning, engagement, and life satisfaction in one's

11   recovery (32–34). Recent conceptual models (35) and interventions (36,37) focused on youth-

12   specific and integrated mental health services also highlight resilience as an important aspect to

13   the recovery process. Additionally, adopting a resilience perspective aligns with more strengths-

14   based and transdiagnostic approaches which aim to better understand processes of recovery

15   relevant to a broader range of adolescent and young adult mental health service users (38).

16   Researchers have begun to uncover resilience factors across and beyond specific diagnoses,

17   which can be targeted in interventions to promote positive development, functioning, and well-

18   being (26,29,30,39). As such, the study of resilience among transition-age youth with SMI can

19   inform developments in recovery-oriented approaches to service delivery and warrants further

20   exploration.

21   In sum, emerging evidence and frameworks of resilience provide a unique lens to

22   understanding mental health among transition-age youth, with the capacity to recognize

23   individuals' strengths, and move beyond the common focus on illness, deficits and problems in

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1 rehabilitation sciences (35). However, researchers have not yet developed a theoretical

2 framework or model of resilience tailored to the unique experiences of transition-age youth who

3 are diagnosed with SMI to guide research and practice (19). In addition, conceptualizations of

4 resilience vary across the scientific literature, which directly impacts how the concept of

5 resilience is understood, operationalized and applied within this context. This is important to

6 address as discrepancies across definitions of resilience may limit measurement, study

7 comparisons, and current understandings of resiliency-informed care approaches in research and

8 clinical practice (23). A comprehensive synthesis of existing evidence will enhance conceptual

9 clarity in this area, identify factors and outcomes that are relevant to transition-age youth's

10 resilience, and inform future work.

11 **Objectives**

12 The overarching purpose of the present scoping review is to synthesize and describe the

13 breadth of scientific literature on resilience among transition-age youth diagnosed with SMI,

14 identify current knowledge gaps, and recommend key areas for future resilience research among

15 this population. Specifically, this scoping review will explore how the concept of resilience has

16 been conceptualized and operationalized in the transition-age youth mental health literature, and

17 identify resilience factors and outcomes that have been studied within the context of transition-

18 age youth's mental health recovery (e.g., adversity, risks, internal and external protective factors,

19 self-regulatory strategies, adaptation and resilience-related outcomes). The focus of this review

20 will be on conceptualizations of resilience from a process-oriented perspective (rather than as a

21 personal trait or outcome).

22 **Methods and Analysis**

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1   A scoping review design was selected based on the exploratory nature of the proposed

2   research question and the current focus on clarifying the concept of resilience. Particularly, a

3   scoping review design allows for a comprehensive summary of knowledge, inclusive of more

4   broad study objectives and methodologies, and is thus recommended for gaining conceptual

5   clarity and identifying key knowledge gaps (40,41).

6   The scoping review protocol will follow the methodological stages outlined by Arksey

7   and O'Malley (2005), and extended by Levac and colleagues (2010), including: i) identifying the

8   research question, ii) identifying relevant studies, iii) study selection, iv) charting the data, v)

9   collating, summarizing, and reporting the results, and vi) stakeholder consultation (42,43).

10   Throughout the review process, an iterative and reflexive approach will be used in order to refine

11   the initial protocol as needed in consultation with a community stakeholder group (involving

12   researchers, clinicians, and transition-age youth with SMI) (42,43). Recent guidance documents

13   (44) and best practices for conducting and reporting scoping reviews (PRISMA-ScR) (45) will

14   also be applied to promote methodological rigor and transparency. The PRISMA-P checklist (46)

15   can be found in Appendix A (online supplementary). The current protocol has been registered

16   through Open Science Framework (https://osf.io/rzfc5), and will be conducted over a one-year

17   timeframe (December 2021 to November 2022).

Stage 1: Identifying the Research Question

19   This scoping review aims to explore the extent and breadth of the current scientific

20   literature on resilience among transition-age youth diagnosed with SMI. Specifically, the review

21   will address two research questions: (1) How has resilience been conceptualized and

22   operationalized (i.e., defined and measured) in the transition-age youth mental health literature?

23   (2) What factors influence resilience among transition-age youth with SMI, and what outcomes

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1 have been studied within the context of transition-age youth's mental health recovery? The

2 research questions have been broadly framed using the PCC mnemonic to address the *population*

3 of transition-age youth diagnosed with SMI and the *concept* of resilience within any *context* of

4 one's mental health recovery (41). Each component is further clarified below, in accordance with

5 the Joanna Briggs Institute scoping review manual (44).

6   *Population*. For the present review, the population is defined as "transition-age youth",

7 including adolescents and young adults between the ages of 16 and 29 years old, who are

8 entering adulthood and have been diagnosed with SMI. It is important to note that definitions of

9 "youth", "adolescents", and "young adults" differ across various cultures and settings, and are

10 thus highly mixed within the scholarly literature. In order to be inclusive of the most common

11 European/United Nations/WHO definitions of this age group and reflective of current mental

12 health service models, the present review will include studies with participants spanning middle

13 adolescence (age 15) to the "upper limit" of young adulthood (age 36) if the target population is

14 clearly defined as "transition-age youth" (3,14,47–50). Additionally, serious mental illness

15 (SMI) is defined as "a mental, behavioral, or emotional disorder resulting in serious functional

16 impairment, which substantially interferes with or limits one or more major life activities", such

17 as one's interpersonal relationships, self-care, employment, or recreation (51,52). Definitions of

18 SMI exclude dementias, developmental disorders, and substance use disorders, as well as mental

19 disorders due to a general medical condition (52). Examples of mental health conditions that may

20 meet criteria for SMI include: major depressive disorders, bipolar disorders, borderline

21 personality disorder, anxiety disorders, eating disorders and schizophrenia spectrum disorders

22 (51,52). Among youth and adolescents (under age 18) the same definition and examples are

23 applied but also occasionally termed "serious emotional disturbance" (SED), rather than SMI

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1 (52,53). Studies with participants experiencing co-morbid disorders which are not the primary

2 focus will also be included in this scoping review.

3   ***Concept.*** While definitions of resilience vary across different research disciplines, most

4 definitions refer to positive adaptation in the face of significant challenge, risk or adversity as

5 central or defining features, and acknowledge the importance of sociocultural factors in shaping

6 experiences and understandings of resilience (19). For the purpose of this scoping review,

7 resilience is defined as a dynamic process that unfolds over time, involving multiple resilience

8 factors that interact to enable individuals to negotiate or recover from stressful life events /

9 adversity (e.g., one's personal characteristics, environment and support networks). Studies that

10 adopt this process-oriented perspective will be included, and the following core elements of

11 resilience and resilience factors will be explored: adversity, risks, internal and external protective

12 factors, self-regulatory strategies, adaptation and resilience-related outcomes (25,30). Studies

13 that focus solely on a trait perspective of resilience, similar constructs (e.g., ego-resilience,

14 psychological capital) or biological / genetic / neurophysiological factors will be omitted. Lastly,

15 given our focus on psychological resilience at the person- or individual-level, studies evaluating

16 family- or community-level resilience will not be included.

17   ***Context.*** While "clinical recovery" is often defined as a reduction in SMI symptoms or

18 impairment (typically in clinical / health care settings), "personal recovery" refers to the

19 processes that contribute to transition-age youth's hope, development, and engagement in

20 meaningful activities (even while facing SMI) and emphasizes the importance of multiple

21 contexts where this occurs (e.g., spanning personal, familial, social and institutional

22 environments) (35). The present review considers mental health recovery primarily through a

23 personal recovery lens, and will thus explore transition-age youth's resilience in any context of

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1   their mental health recovery, which may include individual, community, and health-oriented

2   settings (among others).

3   **Stage 2: Identifying Relevant Literature**

4   *Information source.* To comprehensively review the existing evidence and knowledge

5   base related to resilience in the field of transition-age youth mental health, empirical sources will

6   be considered, including original research / primary studies. Specifically, six electronic databases

7   of value to the fields of psychology, health and rehabilitation sciences will be searched to

8   identify relevant empirical studies: MEDLINE (Ovid), EMBASE (Ovid), PsycINFO, AMED,

9   CINAHL, and Scopus. To enhance the comprehensiveness of the search, relevant journals and

10   the reference list of included sources and similar reviews will be manually searched.

11   *Search strategy.* The search terms and search strategy will be developed by the

12   multidisciplinary review team, in consultation with a health sciences librarian at the University

13   of Toronto. Importantly, keywords have been carefully selected to best capture the complex and

14   evolving terminology used to describe the population and concept reflected in our research

15   question. As mentioned, terms to describe the age group of transition-age youth are highly

16   variable and inconsistent within the literature (e.g., subject headings / keywords may be inclusive

17   of youth / teenagers / adolescents / emerging adults / adults etc.). Clinical and lay language to

18   describe SMI diagnoses have also evolved over time, with "severe and persistent mental illness"

19   and "chronic mental illness" often cited (52). Further, as reflected in the research aims, there is

20   currently no consensus on the definition of resilience and conceptualizations differ based on the

21   context or academic discipline applied (19). To overcome these challenges in the development

22   and execution of our search, we will utilize the following techniques: i) a multi-step search

23   process to ensure relevant sources are not missed (an initial limited search strategy favoring

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1 sensitivity over precision will be conducted first and inform potential revisions making the

2 search strategy more precise); ii) use of Yale MeSH analyzer for piloting; and iii) ongoing expert

3 consultation. Additionally, the search strategy will undergo peer review to enhance its feasibility

4 and rigor (e.g., CADTH Peer Review Checklist for Search Strategies) (54).

5 The preliminary search strategy and list of keywords have been developed using

6 MEDLINE (Ovid) and adapted to each database (see Appendix B online supplementary). The

7 search strategy will explore specified search terms within subject headings, titles, abstracts and

8 keywords. Search terms will be combined using appropriate Boolean logic and operators (e.g.,

9 'and', 'or', 'not').

Stage 3: Study Selection

11 Study selection will follow a collaborative and iterative screening process among the

12 review team using Covidence systematic review software (55) and pre-determined eligibility

13 criteria (42,43). All search results will be exported to Covidence for data management and to

14 remove duplicates. At least two independent reviewers (authors AN and MD) will complete

15 screening in two stages for i) title/abstract and ii) full-text review. The reviewers will complete a

16 calibration exercise using a sample of 10 references to pilot inclusion / exclusion criteria and

17 compare decisions (e.g., include / exclude / uncertain). Formal title/abstract screening will

18 commence when 80% agreement is achieved and will involve regular meetings among reviewers

19 to discuss any challenges or uncertainties. Upon completion of stage 1, full-text references will

20 be obtained and independently screened by the same two reviewers. The same strategy will be

21 applied to stage 2 full-text screening, including piloting (calibration exercise for 10 references)

22 and regular discussion. At each stage, reviewer (inter-rater) agreement will be reported.

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1 Disagreements will be resolved by consensus or by the decision of a third reviewer (senior

2 authors EN and CS).

3   Included sources will address the population of transition-age youth diagnosed with SMI,

4 the concept of resilience (in any context), and will contain original peer reviewed research

5 written in English. Specific language restrictions were made for feasibility purposes.

6 Additionally, the publishing date was limited to the years 2000 to 2022 as this is the time period

7 where a significant rise in resilience research emerged within mental health and rehabilitation

8 sciences (19,29,56). The prioritisation, implementation and evaluation of mental health services

9 specifically tailored to transition-age youth (e.g., early intervention programs) also mainly took

10 root after the year 2000 (13,47,57). Further inclusion / exclusion criteria for the two-stage

11 screening are detailed below.

12 ***Eligibility for Stage 1 Title/Abstract Review:***

13   ***Inclusion criteria.*** a) Population: Refers to transition-age youth diagnosed or living with

14 SMI (as defined previously). b) Concept: Resilience / resiliency is identified as a key focus

15 within the purpose / objectives / research question, outcome measure, and/or findings. c)

16 Context: Is set in any individual, community or health-oriented context of mental health

17 recovery. d) Type of source: Peer reviewed original research (quantitative, qualitative, mixed

18 method). e) Publication language / date: Written in English and published between 2000 and

19 2022.

20   ***Exclusion criteria.*** a) Population: Refers to non-clinical population, general population,

21 children / youth (age 0-14), or childhood developmental disorder. b) Concept: Resilience /

22 resiliency is not an explicit focus. c) Type of source: Peer reviewed articles with the primary aim

23 of developing, reporting or validating the psychometric properties of survey measures /

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1 instruments, study protocols, review articles (e.g., systematic/scoping reviews, meta-analyses),

2 books / book chapters, and grey literature (e.g., editorials, commentaries / reports, clinical

3 guidelines, conference proceedings, and theses / dissertations). d) Publication language / date:

4 Written in another language than English and published before January 1, 2000.

5 *Eligibility for Stage 2 Full-text Review:*

6 *Inclusion criteria.* a) Population: Clearly defined clinical population in accordance with

7 either: participant self-reported history of SMI; clinician confirmed diagnosis of SMI; or DSM-V

8 / ICD-10 system diagnostic criteria. b) Concept: Must explicitly define / operationalize the

9 concept of resilience from a process-oriented perspective and focus on individual-level

10 resilience.

11 *Exclusion criteria.* a) Population: Mixed samples whereby transition-age youth with SMI

12 are encompassed within broader age groups or the general population (without the stratification

13 of results / reporting). b) Concept: Trait resilience, other psychological constructs that are similar

14 or connected to resilience / resiliency (e.g., psychological capital, hardiness, grit, general indices

15 of subjective well-being), family- or community-level resilience, or biological / genetic /

16 neurophysiological factors are identified as the sole / primary focus or outcome.

17 While criteria were developed to maintain a broad scope of selected studies, our hope is

18 that stringent inclusion / exclusion criteria will eliminate sources that only include the concept of

19 resilience as an opinion, recommendation, vague interpretation, or buzzword – as this will not

20 aid in enhancing conceptual clarity in this research area. As such, these broad eligibility criteria

21 may undergo further refinement to ensure that selected sources capture the full breadth of

22 knowledge available related to resilience among young people with SMI.

23 **Stage 4: Data Extraction**

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1   Following recommended data charting methods (42,43), a standardized and systematic

2   charting form (Table 1) will be used to organize and interpret relevant details from the selected

3   sources in line with our research question and objectives. The following information will be

4   charted in Excel: i) general document details, ii) key characteristics of empirical studies (e.g.,

5   research design, methods, intervention details, youth engagement, intersectional approaches,

6   study population, context), iii) how resilience was conceptualized and operationalized (e.g.,

7   definition, theoretical framework / model, academic discipline, measures), and iv) resilience

8   factors and outcomes identified.

9   The preliminary chart form was also developed in accordance with Greenhalgh and

10 colleagues' (2005) meta-narrative approach (58). Specifically, this meta-narrative approach was

11 originally created to detail how a field of study or key concept has evolved over time and to

12 explore potential tensions that exist across research traditions (or "paradigms") within

13 knowledge syntheses (58). A meta-narrative approach is recommended when examining

14 complex, heterogeneous bodies of literature where a key concept of interest has been

15 conceptualized and investigated through different research traditions, and conceptual clarity is

16 needed (58). According to Greenhalgh et al. (2005), a *research tradition* refers to a paradigm of

17 inquiry, undertaken by researchers, that shares four key interrelated dimensions (conceptual,

18 theoretical, methodological, instrumental), and thus shows distinct disciplinary roots, scope and

19 key concepts (58). Research traditions are often characterized and influenced by seminal

20 conceptual papers that inform the direction and focus of future work (58). Alternatively, an

21 *academic discipline* is defined as a broader field of study or branch of knowledge (e.g.,

22 sociology, psychology, medicine) (58).

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1   Data extraction will be a collaborative and iterative process among the review team to

2 ensure that key characteristics, definitions, themes and strengths/limitations are captured. A

3 calibration exercise using a sample of 5 studies will be completed by two reviewers to pilot the

4 chart form. When agreement of at least 80% is achieved, the two independent reviewers (authors

5 AN and MD) will complete the remaining formal data charting procedures for all references. The

6 charting form will be revised as needed based on stakeholder feedback. Consensus will be

7 reached through discussion or final decision by a third reviewer (senior authors EN and CS) if

8 necessary. Any challenges in the organization / categorization of data at this stage will be

9 brought to the four content experts on this protocol (CS, SB, NK, EN), each of whom have over

10 10 years of research and/or clinical experience in young adult mental health and resiliency.

11 *Table 1. Draft charting form*

General document details	
APA citation	Full author, date and journal details.
Country and location	Country of publication (and location if provided).
Study characteristics	
Study purpose	Purpose, research question(s), aim(s), and/or objective(s) of the study.
Study population and sample size	Age range, SMI (clinical diagnosis / self-reported; stage of illness), relevant demographic characteristics. Number of participants.
Study design and methods	Quantitative, qualitative, or mixed methods. Main experimental, observational or qualitative methods used.
	Intervention (if applicable): Description of key characteristics (e.g., intervention purpose / target, type, main components, duration)
	Youth engagement (if applicable): Extent to which youth with SMI were engaged through aspects of the research process.
	Intersectional approaches (if applicable): Description of recruitment procedures, theoretical frameworks, and analyses addressing diversity and intersecting social identities of participants.
Context	The setting of the research if provided (e.g., community, health-oriented, specific treatment / program).
Conceptualization and operationalization of resilience	

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Conceptualization	How was resilience described from a process-oriented perspective?
Definition of resilience	Definition or operationalization of resilience.
Theoretical framework/model	Theory, conceptual model(s) or framework(s) applied.
Seminal papers referenced	Overarching paradigm and seminal conceptual papers that have informed the research (if applicable).
Instruments used to measure resilience	Specific measures / surveys employed (if applicable).
Academic discipline	Broad field of research or practice.
Resilience factors and outcomes	
Adversity / risks	Personal or environmental risk factors identified (if applicable).
Internal / external protective factors	Personal or environmental protective factors identified (if applicable).
Self-regulatory strategies	Strategies identified to self-manage mood, emotions, thoughts, and/or behaviors (if applicable).
Study outcomes	Any outcomes that were measured or described. Description of positive change, resilience-related outcomes, or adaptation (if applicable).
Important results	Description of main findings and implications.

1

2 **Stage 5: Collating, Summarizing, and Reporting the Results**

3   The PRISMA-ScR Checklist will guide the presentation of results in the final report (45).

4 This will include a flow diagram to explicitly detail review decision making processes (45). Data

5 from eligible full-texts will be analyzed and collated using meta-narrative and qualitative content

6 analyses as well as descriptive statistics (e.g., frequencies / counts). Results of this scoping

7 review will be summarized narratively in a descriptive overview (42,43).

8   Qualitative content analysis will be used to identify, analyze, and report patterns across

9 the included empirical sources to understand how resilience has been conceptualized and

10 operationalized among transition-age youth with SMI. Particularly, definitions, measures,

11 resilience factors and outcomes will be open-coded, and then grouped to generate distinct

12 categories. Aspects of the study population and context of mental health recovery may also be

13 analyzed. The inductive and reflexive coding process will be completed by two reviewers

18

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1   (authors AN and MD) using Nvivo software. Categories will then be reviewed and discussed

2   with all members of the multidisciplinary review team (CS, SB, NK, EN) for further refinement.

3   As guided by Greenhalgh et al. (2005) for meta-narrative review, findings will be organized and

4   synthesized to map conceptualizations of resilience over time and across different research

5   traditions (58). Research traditions will be identified through a process of grouping articles that

6   reflect similar theoretical, methodological and/or instrumental approaches (e.g., seminal papers

7   cited, how the authors frame the concept of resilience within the study outcomes or

8   implications). This will allow for easier interpretation of the extent and breadth of the current

9   literature on resilience among transition-age youth diagnosed with SMI. Particularly,

10 comparisons and tensions across definitions of resilience may be highlighted according to each

11 paradigm.

12 Reflexivity will support methodological rigor and transparency by explicitly

13 acknowledging how the researchers' positionality may influence the motivations and

14 methodological choices that ultimately shape the review process, interpretations, and results (59–

15 61). Ongoing reflexive practice will be used to address and challenge researcher biases,

16 assumptions, and preunderstandings that may influence study decisions and analyses, and to

17 critically analyze positions of privilege and power in research activities. Detailed notes of our

18 decision-making processes and justifications will be documented throughout all stages of the

19 scoping review.

20 For the purpose of the present scoping review, we will use a combination of narrative,

21 tabular, and graphical summaries to present key findings (42,43). A traditional summary chart

22 will describe key characteristics of each included source (e.g., author and year of publication,

23 research tradition, academic discipline, study design, study population, definitions of resilience,

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1 measures, main findings). Resilience factors and outcomes will be summarized in a table or

2 figure. A creative graphical / visual depiction of identified research traditions and timeframe will

3 also be used to "map" key findings of the review (58). In sum, the analytic approach has been

4 developed to facilitate conceptual / theoretical advancements in resilience research, identify key

5 knowledge gaps, and highlight potential future directions in the study of transition-age youth

6 resilience and mental health. The presentation and reporting of results (through summaries,

7 tables, and visuals) will be discussed among the multidisciplinary review team and community

8 stakeholder group. Consistent input from the perspective of researchers, clinicians, and

9 transition-age youth with SMI will enhance the relevance and utility of the review findings.

10 **Stage 6: Stakeholder Consultation**

11 The overarching goal of the current scoping review is to systematically explore the

12 current extent and breadth of peer reviewed research on resilience among transition-age youth

13 diagnosed with SMI. Particularly, efforts have been made within the scoping review

14 methodology to provide a holistic and coherent overview of evidence that can inform future

15 research, education, and practice (41–43). In order to achieve these goals, the multidisciplinary

16 review team has been formed to include knowledgeable stakeholders (researchers, clinicians,

17 knowledge users) with backgrounds in psychiatry / early intervention services (NK),

18 occupational therapy / resiliency in rehabilitation sciences (AN, SB, EN), and kinesiology /

19 young adult mental health programming (MD, CS).

20 Following Levac and colleagues' (2010) recommendations, this scoping review will also

21 consult with community stakeholders to gain the perspectives of transition-age youth with lived

22 experience of SMI, clinicians, and other mental health / resiliency researchers (43). To achieve

23 Stage 6 of this review, qualitative focus groups will be conducted virtually (using online

20

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1   teleconferencing). Community stakeholders will be invited through the review team's current

2   research / practice networks and established partnerships with youth-focused mental health

3   services in Canada. Recruitment materials (emails, e-posters) will share details regarding

4   eligibility, focus group participation, and the letter of informed consent form. Interested

5   participants will provide written informed consent by digitally signing a secure online consent

6   form on the University of Toronto's Research Electronic Data Capture (REDCap) platform.

7   Consultative meetings will be held at two time points to inform: i) the research methods

8   (Topic Consultation and Input Meeting), and ii) interpretation, reporting and knowledge

9   translation strategies (Reaction Meeting). Following current recommendations for stakeholder

10   consultation (43,62,63) and focus group studies (64,65), up to 3 focus groups (n = 6-10

11   participants each) will be conducted at each time point. For the Topic Consultation and Input

12   Meeting, community stakeholders will be asked about their perspectives of the review objectives

13   and methods, key areas of focus for data extraction and analysis (e.g., important aspects of

14   transition-age youth resilience to capture within the charting form), and what they would most

15   like to learn from the results of the scoping review. At the time of the Reaction Meeting,

16   community stakeholders will be asked about their impression of key review findings (e.g., how

17   resilience has been defined), whether this resonates with them/their experiences, where

18   gaps/tensions exist that require further investigation, and how this knowledge can be applied to

19   support mental health recovery. This will shape how results are presented and interpreted in the

20   final scoping review paper and guide decision making on knowledge dissemination strategies.

21   We will aim for equal representation among the researchers, clinicians, and young people

22   involved in each focus group. The consent form and group norms will be reviewed with

23   participants at the start of each focus group discussion. Focus groups will be co-facilitated by

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1 two members of the review team (AN, MD) virtually using a semi-structured interview guide.

2 Audio recordings will be transcribed verbatim to complete directed content analysis (66).

3 Complete methods and results will be detailed in the final report (including stakeholder group

4 characteristics, sample size, data collection tools, analysis, and findings) (43). Several

5 recommendations to enhance the trustworthiness of qualitative content analysis will be employed

6 (67,68), including: (i) member checking, (ii) clear description of the context and participant

7 characteristics, (iii) transparent reporting of the coding process and agreement, and (iv) use of

8 illustrative quotes, as well as frequencies / counts where appropriate, to summarize results.

9 Guided by scoping review practices, stakeholder engagement will promote a more

10 collaborative approach, emphasize the voices of young people and knowledge users, and

11 ultimately maximize the potential contribution of the research (43). Particularly, involving

12 transition-age youth with SMI as part of the review process will facilitate feedback on the

13 relevance and usefulness of the review findings. This is considered essential for not only

14 advancing research and practice in youth mental health, but also addressing recent concerns of

15 the "weaponization" of resiliency in rehabilitation (e.g., adding stress, pressure, or individual

16 onus to "become resilient" at times of increased vulnerability) by drawing on the values and

17 perspectives of young people (69–71).

18 **Patient and Public Involvement**

19 Patients and members of the public have not been involved in the design of this scoping

20 review and the protocol development. However, the perspectives of transition-age youth who

21 have experienced SMI will be gathered during the review process. Their feedback will inform

22 our methods, interpretation of results, and knowledge dissemination plan.

23 **Ethics and Dissemination**

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1   This scoping review study received approval by the University of Toronto Health

2   Sciences Research Ethics Board to conduct the community stakeholder input and reaction

3   meetings (stage 6), which involve collection and analysis of primary data. Results of the review

4   will be disseminated through traditional approaches, including open-access peer-reviewed

5   publication(s), presentations at 1-2 national/international conferences, and a plain-language

6   summary report. Additional knowledge translation strategies may be used dependent on

7   community stakeholder feedback to share findings, key messages and future directions (e.g.,

8   infographics, social media).

Conclusion

10   The distinct impact and burden of SMI among young people has been increasingly

11   recognized among researchers and clinicians. This has provoked new research and care

12   approaches centered on building resiliency. Despite a recent surge in examinations of resilience

13   in the context of transition-age youth mental health recovery, there remains a lack of

14   understanding on the core meanings, processes and outcomes of resilience among this

15   population. To our knowledge, this will be the first scoping review to systematically examine

16   how resilience is conceptualized and operationalized among transition-age youth with SMI, and

17   explore what resilience factors and outcomes have been studied. A comprehensive synthesis,

18   developed in collaboration with community stakeholders, is needed to advance research and

19   clinical practice.

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1 **Contributorship Statement:** AN led the conceptualization of this review and drafted the

2 protocol manuscript with support from CS, MD, SB, NK, and EN. MD was involved in the

3 review design and refining the search strategy. CS, SB, NK, and EN were also involved in the

4 review design, and the development of the eligibility criteria and data extraction forms. All

5 authors provided feedback on the manuscript and approval for submitting this protocol

6 manuscript for publication.

7 **Competing Interests:** None declared. There are no competing interests for any author.

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10 **Data Sharing Statement:** No data are associated with this article.

11 **Patient Consent:** Not required.

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Appendix A

PRISMA-P Checklist

		Reporting Item	Page Number
Title			
Identification	#1a	Identify the report as a protocol of a systematic review	2
Update	#1b	If the protocol is for an update of a previous systematic review, identify as such	N/A
Registration			
	#2	If registered, provide the name of the registry (such as PROSPERO) and registration number	2, 8
Authors			
Contact	#3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	1
Contribution	#3b	Describe contributions of protocol authors and identify the guarantor of the review	1, 23
Amendments			
	#4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	N/A
Support			
Sources	#5a	Indicate sources of financial or other support for the review	--
Sponsor	#5b	Provide name for the review funder and / or sponsor	--
Role of sponsor or funder	#5c	Describe roles of funder(s), sponsor(s), and / or institution(s), if any, in developing the protocol	--
Introduction			
Rationale	#6	Describe the rationale for the review in the context of what is already known	4-7
Objectives	#7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	8-10
Methods			
Eligibility criteria	#8	Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review	11-14

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Information sources	#9	Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage	11-12
Search strategy	#10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	Appendix B
Study records - data management	#11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	12
Study records - selection process	#11b	State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis)	12-14
Study records - data collection process	#11c	Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	15-17
Data items	#12	List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications	15-17
Outcomes and prioritization	#13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	15-17
Risk of bias in individual studies	#14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	See note 1
Data synthesis	#15a	Describe criteria under which study data will be quantitatively synthesised	17-18
Data synthesis	#15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data and methods of combining data from studies, including any planned exploration of consistency (such as I2, Kendall's τ)	N/A
Data synthesis	#15c	Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression)	N/A
Data synthesis	#15d	If quantitative synthesis is not appropriate, describe the type of summary planned	17-18

34

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Meta-bias(es)	#16	Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies)	See note 2
Confidence in cumulative evidence	#17	Describe how the strength of the body of evidence will be assessed (such as GRADE)	See note 3

Author notes

1. N/A for scoping reviews
2. N/A for scoping reviews
3. N/A for scoping reviews

Citation: Moher D, Shamseer L, Clarke M, Ghersi D, Liberati A, Petticrew M, Shekelle P, Stewart LA. Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) 2015 statement. Syst Rev. 2015;4(1):1.

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Appendix B

Medline Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-Medline
1	Population (Transition-age youth)	exp Adolescent/ or exp Young Adult/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,kf.
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Anxiety Disorders/ or exp "Bipolar and Related Disorders"/ or exp Dissociative Disorders/ or exp "Feeding and Eating Disorders"/ or exp Mood Disorders/ or exp "Attention Deficit and Disruptive Behavior Disorders"/ or exp Personality Disorders/ or exp Schizophrenia/ or exp Psychotic Disorders/ or exp Affective Disorders, Psychotic/ or exp Capgras Syndrome/ or exp Delusional Parasitosis/ or exp Morgellons Disease/ or exp Paranoid Disorders/ or exp Somatoform Disorders/ or exp "Trauma and Stressor Related Disorders"/ or exp Mentally Ill Persons/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,kf.
5	Concept (Resilience)	exp Resilience, Psychological/
6	Concept (Resilience)	(resilienc*).tw,kf.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

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SCOPING REVIEW PROTOCOL

Embase Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-Embase
1	Population (Transition-age youth)	exp Adolescent/ or exp Young Adult/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,kf.
3	Population (Serious mental illness)	exp Mental Disease/ or exp Anxiety Disorder/ or exp Bipolar Disorder/ or exp Dissociative Disorder/ or exp Eating Disorder/ or exp Emotional Disorder/ or exp Mood Disorder/ or exp Attention Deficit Disorder/ or exp Impulse Control Disorder/ or exp Neurosis/ or exp Personality Disorder/ or exp Schizophrenia Spectrum Disorder/ or exp Schizophrenia/ or exp Psychosis/ or exp Somatoform Disorder/ or exp Posttraumatic Stress Disorder/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,kf.
5	Concept (Resilience)	exp Psychological Resilience/
6	Concept (Resilience)	(resilienc*).tw,kf.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

SCOPING REVIEW PROTOCOL

PsychINFO Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-PsychINFO
1	Population (Transition-age youth)	exp Emerging Adulthood/ or exp Early Adolescence/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw.
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Chronic Mental Illness or exp Serious Mental Illness/ or exp Affective Disorders or exp Anxiety Disorders/ or exp Attention Deficit Disorder/ or exp Bipolar Disorder/ or exp Dissociative Disorders/ or exp Disruptive Behavior Disorders/ or exp Eating Disorders/ or exp Personality Disorders/ or exp Psychosis/ or exp Schizophrenia/ or exp Somatoform Disorders/ or exp "Stress and Trauma Related Disorders"/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw.
5	Concept (Resilience)	exp "Resilience (Psychological)"/
6	Concept (Resilience)	(resilienc*).tw.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

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SCOPING REVIEW PROTOCOL

AMED Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-AMED
1	Population (Transition-age youth)	exp Adolescent/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,et.
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Adjustment Disorders/ or exp Affective Disorders/ or exp Affective Disorders Psychotic/ or exp Bipolar Disorder/ or exp Manic Disorder/ or exp Depressive Disorder/ or exp Mood Disorders/ or exp Anxiety Disorders/ or exp Obsessive Compulsive Disorder/ or exp Phobic Disorders/ or exp Stress Disorders Post Traumatic/ or exp Attention Deficit Disorder with Hyperactivity or exp Child Behavior Disorders/ or exp Dissociative Disorders/ or exp Multiple Personality Disorder/ or exp Eating Disorders/ or exp Anorexia Nervosa/ or exp Bulimia/ or exp Neurotic Disorders/ or exp Personality Disorders/ or exp Borderline Personality Disorder/ or exp Hysteria/ or exp Psychotic Disorders/ or exp Schizophrenia/ or exp Somatoform Disorders/ or exp Conversion Disorder/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,et.
5	Concept (Resilience)	exp Adaptation Psychological/
6	Concept (Resilience)	(resilienc*).tw,et.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english and yr="2000 -Current")

SCOPING REVIEW PROTOCOL

CINHAL Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into CINHAL (EBSCO)
1	Population (Transition-age youth)	(MH "Adolescence+") OR (MH "Young Adult")
2	Population (Transition-age youth)	TI (youth* or "transition age youth*" or teen* or adolescen* or "emerging adult*" or "young adult*" or "early adult*" or "young person*" or "young people*" or juvenile*) OR AB (youth* or "transition age youth*" or teen* or adolescen* or "emerging adult*" or "young adult*" or "early adult*" or "young person*" or "young people*" or juvenile*)
3	Population (Serious mental illness)	(MH "Mental Disorders+") or (MH "Mental Disorders, Chronic") or (MH "Neurotic Disorders+") or (MH "Affective Disorders+") or (MH "Seasonal Affective Disorder") or (MH "Depression+") or (MH "Anxiety Disorders+") or (MH "Social Anxiety Disorders") or (MH "Generalized Anxiety Disorder") or (MH "Panic Disorder") or (MH "Obsessive-Compulsive Disorder+") or (MH "Phobic Disorders+") or (MH " Stress Disorders, Post-Traumatic+") or (MH "Psychotic Disorders+") or (MH "Schizophrenia+") or (MH "Affective Disorders, Psychotic+") or (MH "Bipolar Disorders+") or (MH "Dissociative Disorders+") or (MH "Multiple-Personality Disorder") or (MH "Personality Disorders+") or (MH "Adjustment Disorders+") or (MH "Attention Deficit Hyperactivity Disorder") or (MH "Child Behavior Disorders+") or (MH "Eating Disorders+") or (MH "Binge Eating Disorder") or (MH "Avoidant Restrictive Food Intake Disorder") or (MH "Bulimia Nervosa") or (MH "Bulimia") or (MH "Anorexia Nervosa") or (MH "Anorexia") or (MH "Somatoform Disorders+") or (MH "Body Dysmorphic Disorder")
4	Population (Serious mental illness)	TI ("mental disorder*" or "mental illness*" or "psychiatric disabilit*" or "psychiatric disorder*" or "psychiatric diagnosis*" or "serious emotional disturbance*" or "severe emotional disturbance*" or "mental health condition*" or "anxiety disorder*" or phobia* or "phobic disorder*" or "panic disorder*" or "obsessive-compulsive disorder*" or OCD or "bipolar disorder*" or "manic disorder*" or "manic depression" or "dissociative disorder*" or "multiple-personality disorder" or "eating disorder*" or anorexi* or bulimi* or "binge eating*" or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or "disordered eating" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "cyclothymic disorder*" or cyclothymia or "dysthymic disorder*" or dysthymia or "personality disorder*" or "schizophrenia spectrum disorder*" or schizophrenia or "psychotic disorder*" or psychosis or psychoses or "schizoaffective disorder*" or "psychotic affective disorder*" or "paranoid disorder*" or "somatoform disorder*" or "body dysmorphic disorder*" or "body dysmorphi*" or "post-traumatic stress disorder*" or "adjustment disorder*" or PTSD) OR AB ("mental disorder*" or "mental illness*" or "psychiatric disabilit*" or "psychiatric disorder*" or "psychiatric diagnosis*" or "serious emotional disturbance*" or "severe emotional disturbance*" or "mental health condition*" or "anxiety disorder*" or phobia* or "phobic disorder*" or

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		"panic disorder*" or "obsessive-compulsive disorder*" or OCD or "bipolar disorder*" or "manic disorder*" or "manic depression" or "dissociative disorder*" or "multiple-personality disorder" or "eating disorder*" or anorexi* or bulimi* or "binge eating*" or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or "disordered eating" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "cyclothymic disorder*" or cyclothymia or "dysthymic disorder*" or dysthymia or "personality disorder*" or "schizophrenia spectrum disorder*" or schizophrenia or "psychotic disorder*" or psychosis or psychoses or "schizoaffective disorder*" or "psychotic affective disorder*" or "paranoid disorder*" or "somatoform disorder*" or "body dysmorphic disorder*" or "body dysmorphi*" or "post-traumatic stress disorder*" or "adjustment disorder*" or PTSD)
5	Concept (Resilience)	(MH "Hardiness")
6	Concept (Resilience)	TI (resilienc*) OR AB (resilienc*)
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

SCOPING REVIEW PROTOCOL

Scopus Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into Scopus
1	Population (Transition-age youth)	TITLE-ABS-KEY (youth* or "transition age youth*" or teen* or adolescen* or "emerging adult*" or "young adult*" or "early adult*" or "young person*" or "young people*" or juvenile*)
2	Population (Serious mental illness)	TITLE-ABS-KEY ("mental disorder*" or "mental illness*" or "psychiatric disabilit*" or "psychiatric disorder*" or "psychiatric diagnosis*" or "serious emotional disturbance*" or "severe emotional disturbance*" or "mental health condition*" or "anxiety disorder*" or phobia* or "phobic disorder*" or "panic disorder*" or "obsessive-compulsive disorder*" or OCD or "bipolar disorder*" or "manic disorder*" or "manic depression" or "dissociative disorder*" or "multiple-personality disorder" or "eating disorder*" or anorexi* or bulimi* or "binge eating*" or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or "disordered eating" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "cyclothymic disorder*" or cyclothymia or "dysthymic disorder*" or dysthymia or "personality disorder*" or "schizophrenia spectrum disorder*" or schizophrenia or "psychotic disorder*" or psychosis or psychoses or "schizoaffective disorder*" or "psychotic affective disorder*" or "paranoid disorder*" or "somatoform disorder*" or "body dysmorphic disorder*" or "body dysmorphi*" or "post-traumatic stress disorder*" or "adjustment disorder*" or PTSD)
3	Concept (Resilience)	TITLE-ABS-KEY (resilienc*)
4		1 and 2 and 3
5		limit 4 to (english language and yr="2000 - Current")

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Understanding resilience among transition-age youth with serious mental illness: Protocol for a scoping review

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SCOPING REVIEW PROTOCOL

Understanding resilience among transition-age youth with serious mental illness: Protocol for a scoping review

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SCOPING REVIEW PROTOCOL

1 **Understanding resilience among transition-age youth with serious mental illness: Protocol**

2 **for a scoping review**

3 **Abstract**

4 **Introduction:** Transition-age youth (16-29 years old) are disproportionately affected by the

5 onset, impact and burden of serious mental illness (SMI; e.g., depression, bipolar disorder,

6 schizophrenia spectrum disorders). Emerging evidence has increasingly highlighted the concept

7 of resilience in mental health promotion and treatment approaches for this population. A

8 comprehensive synthesis of existing evidence is needed to enhance conceptual clarity in this

9 area, identify knowledge gaps, and inform future research and practice. As such, the present

10 scoping review is guided by the following questions: How has resilience been conceptualized

11 and operationalized in the transition-age youth mental health literature? What factors influence

12 resilience among transition-age youth with SMI, and what outcomes have been studied within

13 the context of transition-age youth's mental health recovery?

14 **Methods and analysis:** The present protocol will follow six key stages, in accordance with

15 Arksey and O'Malley's (2005) established scoping review methodology and recent iterations of

16 this framework, and has been registered with Open Science Framework (https://osf.io/rzfc5). The

17 protocol and review process will be carried out by a multidisciplinary team in consultation with

18 community stakeholders. A comprehensive search strategy will be conducted across multiple

19 electronic databases to identify relevant empirical literature. Included sources will address the

20 population of transition-age youth (16-29 years) diagnosed with SMI, the concept of resilience

21 (in any context), and will report original research written in English. Data screening and

22 extraction will be completed by at least two independent reviewers. Following meta-narrative

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1   review and qualitative content analyses, findings will be synthesized as a descriptive overview

2   with tabular and graphical summaries.

3   **Ethics and dissemination:** University of Toronto Health Sciences Research Ethics Board

4   approval was obtained to complete the community stakeholder consultation stage of this review.

5   Results will be disseminated through conference presentations, publications, and user-friendly

6   reports and graphics.

7

8   **Strengths and limitations of this study**

9   • This scoping review study will follow recent recommendations and guidance documents

10   to promote methodological rigor and has been registered to enhance transparency.

11   • Variability in how the population (transition-age youth) and concept (resilience) have

12   been defined, as well as restrictions to the search strategy based on language, date, and

13   publication type may limit the breadth of the search.

14   • An assessment of the methodological quality of included studies will not be conducted

15   which limits the types of conclusions and implications that can be drawn from the review.

16   • We will apply an iterative and team-based approach, in consultation with community

17   stakeholders (transition-age youth with SMI, clinicians, researchers) to improve the

18   applicability and dissemination of results.

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SCOPING REVIEW PROTOCOL

Introduction

Transition-age youth (16-29 years old) are the highest risk age group for onset of serious

mental illness (SMI; mental illnesses that cause substantial functional impairment, e.g.,

depression, bipolar disorder, schizophrenia spectrum disorders), the single most disabling group

of disorders worldwide (1,2). The experience of mental illness for young people is unique, in that

it arises during a critical period of psychosocial development, identity formation, and many

complex life transitions (3,4). Access to supportive treatment and relationships, social

marginalization, and stigma continue to influence the course and severity of mental illness for

transition-age youth (5). Indeed, SMI can negatively impact one's overall physical health, quality

of life, and engagement in meaningful life roles and activities, including academics,

employment, and social relationships (1,4,6,7). Further, the experience of chronic and persistent

symptoms of mental illness can contribute to suicide risk, which is the second leading cause of

death among individuals 15-29 years old globally (8,9). Despite the increased risk and burden of

SMI among transition-age youth, this age group faces many barriers in accessing service and

supports, as they transition out of youth services and into the adult mental health and addiction

services sector (10,11). As such, the identification of factors that contribute to transition-age

youth's mental health recovery and early intervention are now recognized as priority areas within

national and global mental health strategies and guidelines (11–14).

Of particular interest, researchers and clinicians have emphasized the importance of

promoting *resilience* in transition-age youth's mental health recovery. Most definitions of

resilience refer to positive adaptation in the face of significant adversity as a central or defining

feature. However, there are many different ways of conceptualizing resilience (e.g., as a trait,

outcome, or dynamic process) (15,16), which has led to some ambiguity in how resilience is

5

1   defined and understood across different research disciplines and perspectives (17,18). For

2   example, many authors have conceptualized and discussed resilience as an outcome resulting

3   from changes made at the individual level, or in relation to positive personal attributes (e.g.,

4   hope, self-efficacy, coping) (19,20). This aligns with early definitions of resilience as an

5   exceptional personal quality or trait, that an individual either has or does not have, which will

6   determine their capacity to both endure incredibly stressful life events and continue on a path

7   towards full functional and emotional recovery (15,21,22). Conceptualizations of resilience as a

8   personal trait or outcome have been criticized in recent research as this does not recognize the

9   critical role of one's environment and available resources (17,23).

10   In more contemporary and holistic conceptions, "resilience has come to be seen less in

11   terms of static characteristics within the individual and more as a dynamic and multi-faceted

12   family of processes that evolve over time" (p. 234) (24). To illustrate, resilience has been

13   conceptualized as a dynamic process, involving one's personal characteristics, environment, and

14   support networks, that influence how an individual "bounces back" from challenging

15   circumstances (e.g., onset of mental illness) (16–18,25). This also acknowledges the integral role

16   of not only the individual, but the social and ecological systems that influence resilience (26,27).

17   For example, Wathen and colleagues (2012) offer the following definition further contextualized

18   to the field of trauma and mental health: "Resilience is a dynamic process in which

19   psychological, social, environmental and biological factors interact to enable an individual at any

20   stage of life to develop, maintain, or regain their mental health despite exposure to adversity" (p.

21   10) (28). Through this lens, resilience is seen as fluid (rather than a fixed or pre-determined

22   trait), arising through multiple pathways that lead to positive indices of flourishing and

23   functioning (29). Taken together, processes of resilience are shaped by the complex interplay

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1 between individual experiences of stress / adversity, multimodal "*resilience factors*" (e.g., risks,

2 internal and external protective factors, self-regulatory strategies), as well as one's adaptation

3 and other resilience-related outcomes (25,30).

4   This process-oriented perspective of resilience has gained increased attention in mental

5 health and rehabilitation sciences research over the past two decades (19,29), and has aligned

6 with the paradigm shift towards recovery models of mental health and the growing popularity

7 and application of positive psychology principles in psychiatry (31). Indeed, resilience research

8 and recovery models of mental health share an orientation towards understanding the processes

9 that underly individual experiences (embedded within one's sociocultural context / environment)

10 and emphasize the importance of hope, meaning, engagement, and life satisfaction in one's

11 recovery (32–34). Recent conceptual models (35) and interventions (36,37) focused on youth-

12 specific and integrated mental health services also highlight resilience as an important aspect to

13 the recovery process. Additionally, adopting a resilience perspective aligns with more strengths-

14 based and transdiagnostic approaches which aim to better understand processes of recovery

15 relevant to a broader range of adolescent and young adult mental health service users (38).

16 Researchers have begun to uncover resilience factors across and beyond specific diagnoses,

17 which can be targeted in interventions to promote positive development, functioning, and well-

18 being (26,29,30,39). As such, the study of resilience among transition-age youth with SMI can

19 inform developments in recovery-oriented approaches to service delivery and warrants further

20 exploration.

21   In sum, emerging evidence and frameworks of resilience provide a unique lens to

22 understanding mental health among transition-age youth, with the capacity to recognize

23 individuals' strengths, and move beyond the common focus on illness, deficits and problems in

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1 rehabilitation sciences (35). However, researchers have not yet developed a theoretical

2 framework or model of resilience tailored to the unique experiences of transition-age youth who

3 are diagnosed with SMI to guide research and practice (19). In addition, conceptualizations of

4 resilience vary across the scientific literature, which directly impacts how the concept of

5 resilience is understood, operationalized and applied within this context. This is important to

6 address as discrepancies across definitions of resilience may limit measurement, study

7 comparisons, and current understandings of resiliency-informed care approaches in research and

8 clinical practice (23). A comprehensive synthesis of existing evidence will enhance conceptual

9 clarity in this area, identify factors and outcomes that are relevant to transition-age youth's

10 resilience, and inform future work.

11 **Objectives**

12 The overarching purpose of the present scoping review is to synthesize and describe the

13 breadth of scientific literature on resilience among transition-age youth diagnosed with SMI,

14 identify current knowledge gaps, and recommend key areas for future resilience research among

15 this population. Specifically, this scoping review will explore how the concept of resilience has

16 been conceptualized and operationalized in the transition-age youth mental health literature, and

17 identify resilience factors and outcomes that have been studied within the context of transition-

18 age youth's mental health recovery (e.g., adversity, risks, internal and external protective factors,

19 self-regulatory strategies, adaptation and resilience-related outcomes). The focus of this review

20 will be on conceptualizations of resilience from a process-oriented perspective (rather than as a

21 personal trait or outcome).

22 **Methods and Analysis**

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SCOPING REVIEW PROTOCOL

1 A scoping review design was selected based on the exploratory nature of the proposed

2 research question and the current focus on clarifying the concept of resilience. Particularly, a

3 scoping review design allows for a comprehensive summary of knowledge, inclusive of more

4 broad study objectives and methodologies, and is thus recommended for gaining conceptual

5 clarity and identifying key knowledge gaps (40,41).

6 The scoping review protocol will follow the methodological stages outlined by Arksey

7 and O'Malley (2005), and extended by Levac and colleagues (2010), including: i) identifying the

8 research question, ii) identifying relevant studies, iii) study selection, iv) charting the data, v)

9 collating, summarizing, and reporting the results, and vi) stakeholder consultation (42,43).

10 Throughout the review process, an iterative and reflexive approach will be used in order to refine

11 the initial protocol as needed in consultation with a community stakeholder group (involving

12 researchers, clinicians, and transition-age youth with SMI) (42,43). Recent guidance documents

13 (44) and best practices for conducting and reporting scoping reviews (PRISMA-ScR) (45) will

14 also be applied to promote methodological rigor and transparency. The PRISMA-P checklist (46)

15 can be found in Appendix A (online supplementary). The current protocol has been registered

16 through Open Science Framework (https://osf.io/rzfc5), and will be conducted over a one-year

17 timeframe (December 2021 to November 2022).

Stage 1: Identifying the Research Question

19 This scoping review aims to explore the extent and breadth of the current scientific

20 literature on resilience among transition-age youth diagnosed with SMI. Specifically, the review

21 will address two research questions: (1) How has resilience been conceptualized and

22 operationalized (i.e., defined and measured) in the transition-age youth mental health literature?

23 (2) What factors influence resilience among transition-age youth with SMI, and what outcomes

9

1 have been studied within the context of transition-age youth's mental health recovery? The

2 research questions have been broadly framed using the PCC mnemonic to address the *population*

3 of transition-age youth diagnosed with SMI and the *concept* of resilience within any *context* of

4 one's mental health recovery (41). Each component is further clarified below, in accordance with

5 the Joanna Briggs Institute scoping review manual (44).

6   ***Population****.* For the present review, the population is defined as "transition-age youth",

7 including adolescents and young adults between the ages of 16 and 29 years old, who are

8 entering adulthood and have been diagnosed with SMI. It is important to note that definitions of

9 "youth", "adolescents", and "young adults" differ across various cultures and settings, and are

10 thus highly mixed within the scholarly literature. In order to be inclusive of the most common

11 European/United Nations/WHO definitions of this age group and reflective of current mental

12 health service models, the present review will include studies with participants spanning middle

13 adolescence (age 15) to the "upper limit" of young adulthood (age 36) if the target population is

14 clearly defined as "transition-age youth" (3,14,47–50). Additionally, serious mental illness

15 (SMI) is defined as "a mental, behavioral, or emotional disorder resulting in serious functional

16 impairment, which substantially interferes with or limits one or more major life activities", such

17 as one's interpersonal relationships, self-care, employment, or recreation (51,52). Definitions of

18 SMI exclude dementias, developmental disorders, and substance use disorders, as well as mental

19 disorders due to a general medical condition (52). Examples of mental health conditions that may

20 meet criteria for SMI include: major depressive disorders, bipolar disorders, borderline

21 personality disorder, anxiety disorders, eating disorders and schizophrenia spectrum disorders

22 (51,52). Among youth and adolescents (under age 18) the same definition and examples are

23 applied but also occasionally termed "serious emotional disturbance" (SED), rather than SMI

10

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1   (52,53). Studies with participants experiencing co-morbid disorders which are not the primary

2   focus will also be included in this scoping review.

3   ***Concept.*** While definitions of resilience vary across different research disciplines, most

4   definitions refer to positive adaptation in the face of significant challenge, risk or adversity as

5   central or defining features, and acknowledge the importance of sociocultural factors in shaping

6   experiences and understandings of resilience (19). For the purpose of this scoping review,

7   resilience is defined as a dynamic process that unfolds over time, involving multiple resilience

8   factors that interact to enable individuals to negotiate or recover from stressful life events /

9   adversity (e.g., one's personal characteristics, environment and support networks). Studies that

10   adopt this process-oriented perspective will be included, and the following core elements of

11   resilience and resilience factors will be explored: adversity, risks, internal and external protective

12   factors, self-regulatory strategies, adaptation and resilience-related outcomes (25,30). Studies

13   that focus solely on a trait perspective of resilience, similar constructs (e.g., ego-resilience,

14   psychological capital) or biological / genetic / neurophysiological factors will be omitted. Lastly,

15   given our focus on psychological resilience at the person- or individual-level, studies evaluating

16   family- or community-level resilience will not be included.

17   ***Context.*** While "clinical recovery" is often defined as a reduction in SMI symptoms or

18   impairment (typically in clinical / health care settings), "personal recovery" refers to the

19   processes that contribute to transition-age youth's hope, development, and engagement in

20   meaningful activities (even while facing SMI) and emphasizes the importance of multiple

21   contexts where this occurs (e.g., spanning personal, familial, social and institutional

22   environments) (35). The present review considers mental health recovery primarily through a

23   personal recovery lens, and will thus explore transition-age youth's resilience in any context of

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1 their mental health recovery, which may include individual, community, and health-oriented

2 settings (among others).

Stage 2: Identifying Relevant Literature

4 *Information source.* To comprehensively review the existing evidence and knowledge

5 base related to resilience in the field of transition-age youth mental health, empirical sources will

6 be considered, including original research / primary studies. Specifically, six electronic databases

7 of value to the fields of psychology, health and rehabilitation sciences will be searched to

8 identify relevant empirical studies: MEDLINE (Ovid), EMBASE (Ovid), PsycINFO, AMED,

9 CINAHL, and Scopus. To enhance the comprehensiveness of the search, relevant journals and

10 the reference list of included sources and similar reviews will be manually searched.

11 *Search strategy.* The search terms and search strategy will be developed by the

12 multidisciplinary review team, in consultation with a health sciences librarian at the University

13 of Toronto. Importantly, keywords have been carefully selected to best capture the complex and

14 evolving terminology used to describe the population and concept reflected in our research

15 question. As mentioned, terms to describe the age group of transition-age youth are highly

16 variable and inconsistent within the literature (e.g., subject headings / keywords may be inclusive

17 of youth / teenagers / adolescents / emerging adults / adults etc.). Clinical and lay language to

18 describe SMI diagnoses have also evolved over time, with "severe and persistent mental illness"

19 and "chronic mental illness" often cited (52). Further, as reflected in the research aims, there is

20 currently no consensus on the definition of resilience and conceptualizations differ based on the

21 context or academic discipline applied (19). To overcome these challenges in the development

22 and execution of our search, we will utilize the following techniques: i) a multi-step search

23 process to ensure relevant sources are not missed (an initial limited search strategy favoring

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1 sensitivity over precision will be conducted first and inform potential revisions making the

2 search strategy more precise); ii) use of Yale MeSH analyzer for piloting; and iii) ongoing expert

3 consultation. Additionally, the search strategy will undergo peer review to enhance its feasibility

4 and rigor (e.g., CADTH Peer Review Checklist for Search Strategies) (54).

5 The preliminary search strategy and list of keywords have been developed using

6 MEDLINE (Ovid) and adapted to each database (see Appendix B online supplementary). The

7 search strategy will explore specified search terms within subject headings, titles, abstracts and

8 keywords. Search terms will be combined using appropriate Boolean logic and operators (e.g.,

9 'and', 'or', 'not').

10 **Stage 3: Study Selection**

11 Study selection will follow a collaborative and iterative screening process among the

12 review team using Covidence systematic review software (55) and pre-determined eligibility

13 criteria (42,43). All search results will be exported to Covidence for data management and to

14 remove duplicates. At least two independent reviewers (authors AN and MD) will complete

15 screening in two stages for i) title/abstract and ii) full-text review. The reviewers will complete a

16 calibration exercise using a sample of 10 references to pilot inclusion / exclusion criteria and

17 compare decisions (e.g., include / exclude / uncertain). Formal title/abstract screening will

18 commence when 80% agreement is achieved and will involve regular meetings among reviewers

19 to discuss any challenges or uncertainties. Upon completion of stage 1, full-text references will

20 be obtained and independently screened by the same two reviewers. The same strategy will be

21 applied to stage 2 full-text screening, including piloting (calibration exercise for 10 references)

22 and regular discussion. At each stage, reviewer (inter-rater) agreement will be reported.

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1 Disagreements will be resolved by consensus or by the decision of a third reviewer (senior

2 authors EN and CS).

3 Included sources will address the population of transition-age youth diagnosed with SMI,

4 the concept of resilience (in any context), and will contain original peer reviewed research

5 written in English. Specific language restrictions were made for feasibility purposes.

6 Additionally, the publishing date was limited to the years 2000 to 2022 as this is the time period

7 where a significant rise in resilience research emerged within mental health and rehabilitation

8 sciences (19,29,56). The prioritisation, implementation and evaluation of mental health services

9 specifically tailored to transition-age youth (e.g., early intervention programs) also mainly took

10 root after the year 2000 (13,47,57). Further inclusion / exclusion criteria for the two-stage

11 screening are detailed below.

12 ***Eligibility for Stage 1 Title/Abstract Review:***

13 ***Inclusion criteria.*** a) Population: Refers to transition-age youth diagnosed or living with

14 SMI (as defined previously). b) Concept: Resilience / resiliency is identified as a key focus

15 within the purpose / objectives / research question, outcome measure, and/or findings. c)

16 Context: Is set in any individual, community or health-oriented context of mental health

17 recovery. d) Type of source: Peer reviewed original research (quantitative, qualitative, mixed

18 method). e) Publication language / date: Written in English and published between 2000 and

19 2022.

20 ***Exclusion criteria.*** a) Population: Refers to non-clinical population, general population,

21 children / youth (age 0-14), or childhood developmental disorder. b) Concept: Resilience /

22 resiliency is not an explicit focus. c) Type of source: Peer reviewed articles with the primary aim

23 of developing, reporting or validating the psychometric properties of survey measures /

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1   instruments, study protocols, review articles (e.g., systematic/scoping reviews, meta-analyses),

2   books / book chapters, and grey literature (e.g., editorials, commentaries / reports, clinical

3   guidelines, conference proceedings, and theses / dissertations). d) Publication language / date:

4   Written in another language than English and published before January 1, 2000.

5   *Eligibility for Stage 2 Full-text Review:*

6   *Inclusion criteria.* a) Population: Clearly defined clinical population in accordance with

7   either: participant self-reported history of SMI; clinician confirmed diagnosis of SMI; or DSM-V

8   / ICD-10 system diagnostic criteria. b) Concept: Must explicitly define / operationalize the

9   concept of resilience from a process-oriented perspective and focus on individual-level

10   resilience.

11   *Exclusion criteria.* a) Population: Mixed samples whereby transition-age youth with SMI

12   are encompassed within broader age groups or the general population (without the stratification

13   of results / reporting). b) Concept: Trait resilience, other psychological constructs that are similar

14   or connected to resilience / resiliency (e.g., psychological capital, hardiness, grit, general indices

15   of subjective well-being), family- or community-level resilience, or biological / genetic /

16   neurophysiological factors are identified as the sole / primary focus or outcome.

17   While criteria were developed to maintain a broad scope of selected studies, our hope is

18   that stringent inclusion / exclusion criteria will eliminate sources that only include the concept of

19   resilience as an opinion, recommendation, vague interpretation, or buzzword – as this will not

20   aid in enhancing conceptual clarity in this research area. As such, these broad eligibility criteria

21   may undergo further refinement to ensure that selected sources capture the full breadth of

22   knowledge available related to resilience among young people with SMI.

23   **Stage 4: Data Extraction**

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1   Following recommended data charting methods (42,43), a standardized and systematic

2   charting form (Table 1) will be used to organize and interpret relevant details from the selected

3   sources in line with our research question and objectives. The following information will be

4   charted in Excel: i) general document details, ii) key characteristics of empirical studies (e.g.,

5   research design, methods, intervention details, youth engagement, intersectional approaches,

6   study population, context), iii) how resilience was conceptualized and operationalized (e.g.,

7   definition, theoretical framework / model, academic discipline, measures), and iv) resilience

8   factors and outcomes identified.

9   The preliminary chart form was also developed in accordance with Greenhalgh and

10   colleagues' (2005) meta-narrative approach (58). Specifically, this meta-narrative approach was

11   originally created to detail how a field of study or key concept has evolved over time and to

12   explore potential tensions that exist across research traditions (or "paradigms") within

13   knowledge syntheses (58). A meta-narrative approach is recommended when examining

14   complex, heterogeneous bodies of literature where a key concept of interest has been

15   conceptualized and investigated through different research traditions, and conceptual clarity is

16   needed (58). According to Greenhalgh et al. (2005), a *research tradition* refers to a paradigm of

17   inquiry, undertaken by researchers, that shares four key interrelated dimensions (conceptual,

18   theoretical, methodological, instrumental), and thus shows distinct disciplinary roots, scope and

19   key concepts (58). Research traditions are often characterized and influenced by seminal

20   conceptual papers that inform the direction and focus of future work (58). Alternatively, an

21   *academic discipline* is defined as a broader field of study or branch of knowledge (e.g.,

22   sociology, psychology, medicine) (58).

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1   Data extraction will be a collaborative and iterative process among the review team to

2   ensure that key characteristics, definitions, themes and strengths/limitations are captured. A

3   calibration exercise using a sample of 5 studies will be completed by two reviewers to pilot the

4   chart form. When agreement of at least 80% is achieved, the two independent reviewers (authors

5   AN and MD) will complete the remaining formal data charting procedures for all references. The

6   charting form will be revised as needed based on stakeholder feedback. Consensus will be

7   reached through discussion or final decision by a third reviewer (senior authors EN and CS) if

8   necessary. Any challenges in the organization / categorization of data at this stage will be

9   brought to the four content experts on this protocol (CS, SB, NK, EN), each of whom have over

10 10 years of research and/or clinical experience in young adult mental health and resiliency.

11 *Table 1. Draft charting form*

General document details	
APA citation	Full author, date and journal details.
Country and location	Country of publication (and location if provided).
Study characteristics	
Study purpose	Purpose, research question(s), aim(s), and/or objective(s) of the study.
Study population and sample size	Age range, SMI (clinical diagnosis / self-reported; stage of illness), relevant demographic characteristics. Number of participants.
Study design and methods	Quantitative, qualitative, or mixed methods. Main experimental, observational or qualitative methods used.
	Intervention (if applicable): Description of key characteristics (e.g., intervention purpose / target, type, main components, duration)
	Youth engagement (if applicable): Extent to which youth with SMI were engaged through aspects of the research process.
	Intersectional approaches (if applicable): Description of recruitment procedures, theoretical frameworks, and analyses addressing diversity and intersecting social identities of participants.
Context	The setting of the research if provided (e.g., community, health-oriented, specific treatment / program).
Conceptualization and operationalization of resilience	

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Conceptualization	How was resilience described from a process-oriented perspective?
Definition of resilience	Definition or operationalization of resilience.
Theoretical framework/model	Theory, conceptual model(s) or framework(s) applied.
Seminal papers referenced	Overarching paradigm and seminal conceptual papers that have informed the research (if applicable).
Instruments used to measure resilience	Specific measures / surveys employed (if applicable).
Academic discipline	Broad field of research or practice.
Resilience factors and outcomes	
Adversity / risks	Personal or environmental risk factors identified (if applicable).
Internal / external protective factors	Personal or environmental protective factors identified (if applicable).
Self-regulatory strategies	Strategies identified to self-manage mood, emotions, thoughts, and/or behaviors (if applicable).
Study outcomes	Any outcomes that were measured or described. Description of positive change, resilience-related outcomes, or adaptation (if applicable).
Important results	Description of main findings and implications.

Stage 5: Collating, Summarizing, and Reporting the Results

The PRISMA-ScR Checklist will guide the presentation of results in the final report (45). This will include a flow diagram to explicitly detail review decision making processes (45). Data from eligible full-texts will be analyzed and collated using meta-narrative and qualitative content analyses as well as descriptive statistics (e.g., frequencies / counts). Results of this scoping review will be summarized narratively in a descriptive overview (42,43).

Qualitative content analysis will be used to identify, analyze, and report patterns across the included empirical sources to understand how resilience has been conceptualized and operationalized among transition-age youth with SMI. Particularly, definitions, measures, resilience factors and outcomes will be open-coded, and then grouped to generate distinct categories. Aspects of the study population and context of mental health recovery may also be analyzed. The inductive and reflexive coding process will be completed by two reviewers

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1 (authors AN and MD) using Nvivo software. Categories will then be reviewed and discussed

2 with all members of the multidisciplinary review team (CS, SB, NK, EN) for further refinement.

3 As guided by Greenhalgh et al. (2005) for meta-narrative review, findings will be organized and

4 synthesized to map conceptualizations of resilience over time and across different research

5 traditions (58). Research traditions will be identified through a process of grouping articles that

6 reflect similar theoretical, methodological and/or instrumental approaches (e.g., seminal papers

7 cited, how the authors frame the concept of resilience within the study outcomes or

8 implications). This will allow for easier interpretation of the extent and breadth of the current

9 literature on resilience among transition-age youth diagnosed with SMI. Particularly,

10 comparisons and tensions across definitions of resilience may be highlighted according to each

11 paradigm.

12 Reflexivity will support methodological rigor and transparency by explicitly

13 acknowledging how the researchers' positionality may influence the motivations and

14 methodological choices that ultimately shape the review process, interpretations, and results (59–

15 61). Ongoing reflexive practice will be used to address and challenge researcher biases,

16 assumptions, and preunderstandings that may influence study decisions and analyses, and to

17 critically analyze positions of privilege and power in research activities. Detailed notes of our

18 decision-making processes and justifications will be documented throughout all stages of the

19 scoping review.

20 For the purpose of the present scoping review, we will use a combination of narrative,

21 tabular, and graphical summaries to present key findings (42,43). A traditional summary chart

22 will describe key characteristics of each included source (e.g., author and year of publication,

23 research tradition, academic discipline, study design, study population, definitions of resilience,

19

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1 measures, main findings). Resilience factors and outcomes will be summarized in a table or

2 figure. A creative graphical / visual depiction of identified research traditions and timeframe will

3 also be used to "map" key findings of the review (58). In sum, the analytic approach has been

4 developed to facilitate conceptual / theoretical advancements in resilience research, identify key

5 knowledge gaps, and highlight potential future directions in the study of transition-age youth

6 resilience and mental health. The presentation and reporting of results (through summaries,

7 tables, and visuals) will be discussed among the multidisciplinary review team and community

8 stakeholder group. Consistent input from the perspective of researchers, clinicians, and

9 transition-age youth with SMI will enhance the relevance and utility of the review findings.

10 **Stage 6: Stakeholder Consultation**

11 The overarching goal of the current scoping review is to systematically explore the

12 current extent and breadth of peer reviewed research on resilience among transition-age youth

13 diagnosed with SMI. Particularly, efforts have been made within the scoping review

14 methodology to provide a holistic and coherent overview of evidence that can inform future

15 research, education, and practice (41–43). In order to achieve these goals, the multidisciplinary

16 review team has been formed to include knowledgeable stakeholders (researchers, clinicians,

17 knowledge users) with backgrounds in psychiatry / early intervention services (NK),

18 occupational therapy / resiliency in rehabilitation sciences (AN, SB, EN), and kinesiology /

19 young adult mental health programming (MD, CS).

20 Following Levac and colleagues' (2010) recommendations, this scoping review will also

21 consult with community stakeholders to gain the perspectives of transition-age youth with lived

22 experience of SMI, clinicians, and other mental health / resiliency researchers (43). To achieve

23 Stage 6 of this review, qualitative focus groups will be conducted virtually (using online

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1   teleconferencing). Community stakeholders will be invited through the review team's current

2   research / practice networks and established partnerships with youth-focused mental health

3   services in Canada. Recruitment materials (emails, e-posters) will share details regarding

4   eligibility, focus group participation, and the letter of informed consent form. Interested

5   participants will provide written informed consent by digitally signing a secure online consent

6   form on the University of Toronto's Research Electronic Data Capture (REDCap) platform.

7   Consultative meetings will be held at two time points to inform: i) the research methods

8   (Topic Consultation and Input Meeting), and ii) interpretation, reporting and knowledge

9   translation strategies (Reaction Meeting). Following current recommendations for stakeholder

10 consultation (43,62,63) and focus group studies (64,65), up to 3 focus groups (n = 6-10

11 participants each) will be conducted at each time point. For the Topic Consultation and Input

12 Meeting, community stakeholders will be asked about their perspectives of the review objectives

13 and methods, key areas of focus for data extraction and analysis (e.g., important aspects of

14 transition-age youth resilience to capture within the charting form), and what they would most

15 like to learn from the results of the scoping review. At the time of the Reaction Meeting,

16 community stakeholders will be asked about their impression of key review findings (e.g., how

17 resilience has been defined), whether this resonates with them/their experiences, where

18 gaps/tensions exist that require further investigation, and how this knowledge can be applied to

19 support mental health recovery. This will shape how results are presented and interpreted in the

20 final scoping review paper and guide decision making on knowledge dissemination strategies.

21 We will aim for equal representation among the researchers, clinicians, and young people

22 involved in each focus group. The consent form and group norms will be reviewed with

23 participants at the start of each focus group discussion. Focus groups will be co-facilitated by

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1 two members of the review team (AN, MD) virtually using a semi-structured interview guide.

2 Audio recordings will be transcribed verbatim to complete directed content analysis (66).

3 Complete methods and results will be detailed in the final report (including stakeholder group

4 characteristics, sample size, data collection tools, analysis, and findings) (43). Several

5 recommendations to enhance the trustworthiness of qualitative content analysis will be employed

6 (67,68), including: (i) member checking, (ii) clear description of the context and participant

7 characteristics, (iii) transparent reporting of the coding process and agreement, and (iv) use of

8 illustrative quotes, as well as frequencies / counts where appropriate, to summarize results.

9   Guided by scoping review practices, stakeholder engagement will promote a more

10 collaborative approach, emphasize the voices of young people and knowledge users, and

11 ultimately maximize the potential contribution of the research (43). Particularly, involving

12 transition-age youth with SMI as part of the review process will facilitate feedback on the

13 relevance and usefulness of the review findings. This is considered essential for not only

14 advancing research and practice in youth mental health, but also addressing recent concerns of

15 the "weaponization" of resiliency in rehabilitation (e.g., adding stress, pressure, or individual

16 onus to "become resilient" at times of increased vulnerability) by drawing on the values and

17 perspectives of young people (69–71).

18 Patient and Public Involvement

19   Patients and members of the public have not been involved in the design of this scoping

20 review and the protocol development. However, the perspectives of transition-age youth who

21 have experienced SMI will be gathered during the review process. Their feedback will inform

22 our methods, interpretation of results, and knowledge dissemination plan.

23   **Ethics and Dissemination**

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1   This scoping review study received approval by the University of Toronto Health

2   Sciences Research Ethics Board to conduct the community stakeholder input and reaction

3   meetings (stage 6), which involve collection and analysis of primary data. Results of the review

4   will be disseminated through traditional approaches, including open-access peer-reviewed

5   publication(s), presentations at 1-2 national/international conferences, and a plain-language

6   summary report. Additional knowledge translation strategies may be used dependent on

7   community stakeholder feedback to share findings, key messages and future directions (e.g.,

8   infographics, social media).

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1 **Contributorship Statement:** AN led the conceptualization of this review and drafted the

2 protocol manuscript with support from CS, MD, SB, NK, and EN. MD was involved in the

3 review design and refining the search strategy. CS, SB, NK, and EN were also involved in the

4 review design, and the development of the eligibility criteria and data extraction forms. All

5 authors provided feedback on the manuscript and approval for submitting this protocol

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Appendix A

PRISMA-P Checklist

		Reporting Item	Page Number
Title			
Identification	#1a	Identify the report as a protocol of a systematic review	2
Update	#1b	If the protocol is for an update of a previous systematic review, identify as such	N/A
Registration			
	#2	If registered, provide the name of the registry (such as PROSPERO) and registration number	2, 8
Authors			
Contact	#3a	Provide name, institutional affiliation, e-mail address of all protocol authors; provide physical mailing address of corresponding author	1
Contribution	#3b	Describe contributions of protocol authors and identify the guarantor of the review	1, 23
Amendments			
	#4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	N/A
Support			
Sources	#5a	Indicate sources of financial or other support for the review	--
Sponsor	#5b	Provide name for the review funder and / or sponsor	--
Role of sponsor or funder	#5c	Describe roles of funder(s), sponsor(s), and / or institution(s), if any, in developing the protocol	--
Introduction			
Rationale	#6	Describe the rationale for the review in the context of what is already known	4-7
Objectives	#7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	8-10
Methods			
Eligibility criteria	#8	Specify the study characteristics (such as PICO, study design, setting, time frame) and report characteristics (such as years considered, language, publication status) to be used as criteria for eligibility for the review	11-14

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Information sources	#9	Describe all intended information sources (such as electronic databases, contact with study authors, trial registers or other grey literature sources) with planned dates of coverage	11-12
Search strategy	#10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	Appendix B
Study records - data management	#11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	12
Study records - selection process	#11b	State the process that will be used for selecting studies (such as two independent reviewers) through each phase of the review (that is, screening, eligibility and inclusion in meta-analysis)	12-14
Study records - data collection process	#11c	Describe planned method of extracting data from reports (such as piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	15-17
Data items	#12	List and define all variables for which data will be sought (such as PICO items, funding sources), any pre-planned data assumptions and simplifications	15-17
Outcomes and prioritization	#13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	15-17
Risk of bias in individual studies	#14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	See note 1
Data synthesis	#15a	Describe criteria under which study data will be quantitatively synthesised	17-18
Data synthesis	#15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data and methods of combining data from studies, including any planned exploration of consistency (such as I2, Kendall's τ)	N/A
Data synthesis	#15c	Describe any proposed additional analyses (such as sensitivity or subgroup analyses, meta-regression)	N/A
Data synthesis	#15d	If quantitative synthesis is not appropriate, describe the type of summary planned	17-18

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| Meta-bias(es) | #16 | Specify any planned assessment of meta-bias(es) (such as publication bias across studies, selective reporting within studies) | See note 2 |
| Confidence in cumulative evidence | #17 | Describe how the strength of the body of evidence will be assessed (such as GRADE) | See note 3 |

Author notes

1. N/A for scoping reviews
2. N/A for scoping reviews
3. N/A for scoping reviews

Citation: Moher D, Shamseer L, Clarke M, Ghersi D, Liberati A, Petticrew M, Shekelle P, Stewart LA. Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) 2015 statement. Syst Rev. 2015;4(1):1.

The PRISMA-P elaboration and explanation paper is distributed under the terms of the Creative Commons Attribution License CC-BY. This checklist can be completed online using https://www.goodreports.org/, a tool made by the EQUATOR Network in collaboration with Penelope.ai

SCOPING REVIEW PROTOCOL

Appendix B

Medline Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-Medline
1	Population (Transition-age youth)	exp Adolescent/ or exp Young Adult/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,kf.
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Anxiety Disorders/ or exp "Bipolar and Related Disorders"/ or exp Dissociative Disorders/ or exp "Feeding and Eating Disorders"/ or exp Mood Disorders/ or exp "Attention Deficit and Disruptive Behavior Disorders"/ or exp Personality Disorders/ or exp Schizophrenia/ or exp Psychotic Disorders/ or exp Affective Disorders, Psychotic/ or exp Capgras Syndrome/ or exp Delusional Parasitosis/ or exp Morgellons Disease/ or exp Paranoid Disorders/ or exp Somatoform Disorders/ or exp "Trauma and Stressor Related Disorders"/ or exp Mentally Ill Persons/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,kf.
5	Concept (Resilience)	exp Resilience, Psychological/
6	Concept (Resilience)	(resilienc*).tw,kf.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

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SCOPING REVIEW PROTOCOL

Embase Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-Embase
1	Population (Transition-age youth)	exp Adolescent/ or exp Young Adult/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,kf.
3	Population (Serious mental illness)	exp Mental Disease/ or exp Anxiety Disorder/ or exp Bipolar Disorder/ or exp Dissociative Disorder/ or exp Eating Disorder/ or exp Emotional Disorder/ or exp Mood Disorder/ or exp Attention Deficit Disorder/ or exp Impulse Control Disorder/ or exp Neurosis/ or exp Personality Disorder/ or exp Schizophrenia Spectrum Disorder/ or exp Schizophrenia/ or exp Psychosis/ or exp Somatoform Disorder/ or exp Posttraumatic Stress Disorder/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,kf.
5	Concept (Resilience)	exp Psychological Resilience/
6	Concept (Resilience)	(resilienc*).tw,kf.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

SCOPING REVIEW PROTOCOL

PsychINFO Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-PsychINFO
1	Population (Transition-age youth)	exp Emerging Adulthood/ or exp Early Adolescence/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw.
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Chronic Mental Illness or exp Serious Mental Illness/ or exp Affective Disorders or exp Anxiety Disorders/ or exp Attention Deficit Disorder/ or exp Bipolar Disorder/ or exp Dissociative Disorders/ or exp Disruptive Behavior Disorders/ or exp Eating Disorders/ or exp Personality Disorders/ or exp Psychosis/ or exp Schizophrenia/ or exp Somatoform Disorders/ or exp "Stress and Trauma Related Disorders"/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw.
5	Concept (Resilience)	exp "Resilience (Psychological)"/
6	Concept (Resilience)	(resilienc*).tw.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

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SCOPING REVIEW PROTOCOL

AMED Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into OVID-AMED
1	Population (Transition-age youth)	exp Adolescent/
2	Population (Transition-age youth)	(youth* or transition age youth* or teen* or adolescen* or emerging adult* or young adult* or early adult* or young person* or young people* or juvenile*).tw,et.
3	Population (Serious mental illness)	exp Mental Disorders/ or exp Adjustment Disorders/ or exp Affective Disorders/ or exp Affective Disorders Psychotic/ or exp Bipolar Disorder/ or exp Manic Disorder/ or exp Depressive Disorder/ or exp Mood Disorders/ or exp Anxiety Disorders/ or exp Obsessive Compulsive Disorder/ or exp Phobic Disorders/ or exp Stress Disorders Post Traumatic/ or exp Attention Deficit Disorder with Hyperactivity or exp Child Behavior Disorders/ or exp Dissociative Disorders/ or exp Multiple Personality Disorder/ or exp Eating Disorders/ or exp Anorexia Nervosa/ or exp Bulimia/ or exp Neurotic Disorders/ or exp Personality Disorders/ or exp Borderline Personality Disorder/ or exp Hysteria/ or exp Psychotic Disorders/ or exp Schizophrenia/ or exp Somatoform Disorders/ or exp Conversion Disorder/
4	Population (Serious mental illness)	(mental disorder* or mental illness* or psychiatric disabilit* or psychiatric disorder* or psychiatric diagnosis* or serious emotional disturbance* or severe emotional disturbance* or "mental health condition*" or anxiety disorder* or phobia* or phobic disorder* or panic disorder* or obsessive-compulsive disorder* or OCD or bipolar disorder* or manic disorder* or manic depression or dissociative disorder* or multiple-personality disorder or eating disorder* or anorexi* or bulimi* or binge eating* or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or disordered eating or mood disorder* or depressive disorder* or affective disorder* or depression or cyclothymic disorder* or cyclothymia or dysthymic disorder* or dysthymia or personality disorder* or schizophrenia spectrum disorder* or schizophrenia or psychotic disorder* or psychosis or psychoses or schizoaffective disorder* or psychotic affective disorder* or paranoid disorder* or somatoform disorder* or body dysmorphic disorder* or body dysmorphi* or post-traumatic stress disorder* or adjustment disorder* or PTSD).tw,et.
5	Concept (Resilience)	exp Adaptation Psychological/
6	Concept (Resilience)	(resilienc*).tw,et.
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english and yr="2000 -Current")

SCOPING REVIEW PROTOCOL

CINHAL Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into CINHAL (EBSCO)
1	Population (Transition-age youth)	(MH "Adolescence+") OR (MH "Young Adult")
2	Population (Transition-age youth)	TI (youth* or "transition age youth*" or teen* or adolescen* or "emerging adult*" or "young adult*" or "early adult*" or "young person*" or "young people*" or juvenile*) OR AB (youth* or "transition age youth*" or teen* or adolescen* or "emerging adult*" or "young adult*" or "early adult*" or "young person*" or "young people*" or juvenile*)
3	Population (Serious mental illness)	(MH "Mental Disorders+") or (MH "Mental Disorders, Chronic") or (MH "Neurotic Disorders+") or (MH "Affective Disorders+") or (MH "Seasonal Affective Disorder") or (MH "Depression+") or (MH "Anxiety Disorders+") or (MH "Social Anxiety Disorders") or (MH "Generalized Anxiety Disorder") or (MH "Panic Disorder") or (MH "Obsessive-Compulsive Disorder+") or (MH "Phobic Disorders+") or (MH " Stress Disorders, Post-Traumatic+") or (MH "Psychotic Disorders+") or (MH "Schizophrenia+") or (MH "Affective Disorders, Psychotic+") or (MH "Bipolar Disorders+") or (MH "Dissociative Disorders+") or (MH "Multiple-Personality Disorder") or (MH "Personality Disorders+") or (MH "Adjustment Disorders+") or (MH "Attention Deficit Hyperactivity Disorder") or (MH "Child Behavior Disorders+") or (MH "Eating Disorders+") or (MH "Binge Eating Disorder") or (MH "Avoidant Restrictive Food Intake Disorder") or (MH "Bulimia Nervosa") or (MH "Bulimia") or (MH "Anorexia Nervosa") or (MH "Anorexia") or (MH "Somatoform Disorders+") or (MH "Body Dysmorphic Disorder")
4	Population (Serious mental illness)	TI ("mental disorder*" or "mental illness*" or "psychiatric disabilit*" or "psychiatric disorder*" or "psychiatric diagnosis*" or "serious emotional disturbance*" or "severe emotional disturbance*" or "mental health condition*" or "anxiety disorder*" or phobia* or "phobic disorder*" or "panic disorder*" or "obsessive-compulsive disorder*" or OCD or "bipolar disorder*" or "manic disorder*" or "manic depression" or "dissociative disorder*" or "multiple-personality disorder" or "eating disorder*" or anorexi* or bulimi* or "binge eating*" or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or "disordered eating" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "cyclothymic disorder*" or cyclothymia or "dysthymic disorder*" or dysthymia or "personality disorder*" or "schizophrenia spectrum disorder*" or schizophrenia or "psychotic disorder*" or psychosis or psychoses or "schizoaffective disorder*" or "psychotic affective disorder*" or "paranoid disorder*" or "somatoform disorder*" or "body dysmorphic disorder*" or "body dysmorphi*" or "post-traumatic stress disorder*" or "adjustment disorder*" or PTSD) OR AB ("mental disorder*" or "mental illness*" or "psychiatric disabilit*" or "psychiatric disorder*" or "psychiatric diagnosis*" or "serious emotional disturbance*" or "severe emotional disturbance*" or "mental health condition*" or "anxiety disorder*" or phobia* or "phobic disorder*" or

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SCOPING REVIEW PROTOCOL

		"panic disorder*" or "obsessive-compulsive disorder*" or OCD or "bipolar disorder*" or "manic disorder*" or "manic depression" or "dissociative disorder*" or "multiple-personality disorder" or "eating disorder*" or anorexi* or bulimi* or "binge eating*" or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or "disordered eating" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "cyclothymic disorder*" or cyclothymia or "dysthymic disorder*" or dysthymia or "personality disorder*" or "schizophrenia spectrum disorder*" or schizophrenia or "psychotic disorder*" or psychosis or psychoses or "schizoaffective disorder*" or "psychotic affective disorder*" or "paranoid disorder*" or "somatoform disorder*" or "body dysmorphic disorder*" or "body dysmorphi*" or "post-traumatic stress disorder*" or "adjustment disorder*" or PTSD)
5	Concept (Resilience)	(MH "Hardiness")
6	Concept (Resilience)	TI (resilienc*) OR AB (resilienc*)
7		1 or 2
8		3 or 4
9		5 or 6
10		7 and 8 and 9
11		limit 10 to (english language and humans and yr="2000 - Current")

SCOPING REVIEW PROTOCOL

Scopus Database Search Strategy

Search line #	PCC conceptual term of interest	Search term entered into Scopus
1	Population (Transition-age youth)	TITLE-ABS-KEY (youth* or "transition age youth*" or teen* or adolescen* or "emerging adult*" or "young adult*" or "early adult*" or "young person*" or "young people*" or juvenile*)
2	Population (Serious mental illness)	TITLE-ABS-KEY ("mental disorder*" or "mental illness*" or "psychiatric disabilit*" or "psychiatric disorder*" or "psychiatric diagnosis*" or "serious emotional disturbance*" or "severe emotional disturbance*" or "mental health condition*" or "anxiety disorder*" or phobia* or "phobic disorder*" or "panic disorder*" or "obsessive-compulsive disorder*" or OCD or "bipolar disorder*" or "manic disorder*" or "manic depression" or "dissociative disorder*" or "multiple-personality disorder" or "eating disorder*" or anorexi* or bulimi* or "binge eating*" or "eating disorder not otherwise specified" or EDNOS or "other specified feeding or eating disorder" or OSFED or "disordered eating" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "cyclothymic disorder*" or cyclothymia or "dysthymic disorder*" or dysthymia or "personality disorder*" or "schizophrenia spectrum disorder*" or schizophrenia or "psychotic disorder*" or psychosis or psychoses or "schizoaffective disorder*" or "psychotic affective disorder*" or "paranoid disorder*" or "somatoform disorder*" or "body dysmorphic disorder*" or "body dysmorphi*" or "post-traumatic stress disorder*" or "adjustment disorder*" or PTSD)
3	Concept (Resilience)	TITLE-ABS-KEY (resilienc*)
4		1 and 2 and 3
5		limit 4 to (english language and yr="2000 - Current")