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

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Complete List of Authors:	Nesbitt, Amy; University of Toronto, Rehabilitation Sciences Institute Sabiston, Catherine; University of Toronto, Faculty of Kinesiology and Physical Education deJonge, Melissa; University of Toronto, Faculty of Kinesiology and Physical Education Barbic, Skye; The University of British Columbia, Occupational Science and Occupational Therapy; Foundry Kozloff, Nicole; Centre for Addiction and Mental Health Nalder, Emily; University of Toronto, Occupational Science and Occupational Therapy; University of Toronto, Rehabilitation Sciences Institute
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1 **Understanding resilience among transition-age youth with serious mental illness: Protocol**
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5 **for a scoping review**
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8 Amy E. Nesbitt, MSc (amy.nesbitt@mail.utoronto.ca)^{a*}
9

10 Catherine M. Sabiston, PhD (catherine.sabiston@utoronto.ca)^b
11

12 Melissa L. deJonge, MSc (melissa.dejonge@utoronto.ca)^b
13

14 Skye Barbic, PhD (skye.barbic@ubc.ca)^{c,d}
15

16 Nicole Kozloff, MD, SM (nicole.kozloff@camh.ca)^e
17

18 Emily Nalder, PhD (emily.nalder@utoronto.ca)^{a,f}
19

20
21
22 ^a Rehabilitation Sciences Institute, University of Toronto (500 University Avenue, Toronto, ON,
23 Canada, M5G 1V7)
24

25 ^b Faculty of Kinesiology and Physical Education, University of Toronto (55 Harbord Street,
26 Toronto, ON, Canada, M5S 2W6)
27

28 ^c Department of Occupational Science and Occupational Therapy, University of British
29 Columbia (T325 - 2211 Wesbrook Mall, Vancouver, BC, Canada, V6T 2B5)
30

31 ^d Foundry (Vancouver, BC, Canada)
32

33 ^e Centre for Addiction and Mental Health (250 College Street, Toronto, ON, Canada, M5T 1R8)
34

35 ^f Department of Occupational Science and Occupational Therapy, University of Toronto (500
36 University Avenue, Toronto, ON, Canada, M5G 1V7)
37

38 *Corresponding author: Amy E. Nesbitt, MSc, OT Reg. (Ont.). Rehabilitation Sciences Institute,
39 University of Toronto, 500 University Avenue, Toronto, ON, Canada, M5G 1V7. Phone: 416-
40 978-5837. Fax: 416-971-2118. Email: amy.nesbitt@mail.utoronto.ca
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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.

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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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.

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).

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**

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1 **Information source.** To comprehensively review the existing evidence and knowledge base related to resilience in the field of transition-age youth mental health, empirical sources will be considered, including original research / primary studies. Specifically, six electronic databases of value to the fields of psychology, health and rehabilitation sciences will be searched to identify relevant empirical studies: MEDLINE (Ovid), EMBASE (Ovid), PsycINFO, AMED, CINAHL, and Scopus. To enhance the comprehensiveness of the search, relevant journals and the reference list of included sources will be manually / hand-searched.

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1 **Search strategy.** The search terms and search strategy will be developed by the multidisciplinary review team, in consultation with a health sciences librarian at (details removed for anonymous peer review). Importantly, keywords have been carefully selected to best capture the complex and evolving terminology used to describe the population and concept reflected in our research question. As mentioned, terms to describe the age group of transition-age youth are highly variable and inconsistent within the literature (e.g., subject headings / keywords may be inclusive of youth / teenagers / adolescents / emerging adults / adults etc.). Clinical and lay language to describe SMI diagnoses have also evolved over time, with “severe and persistent mental illness” and “chronic mental illness” often cited (52). Further, as reflected in the research aims, there is currently no consensus on the definition of resilience and conceptualizations differ based on the context or academic discipline applied (19). To overcome these challenges in the development and execution of our search, we will utilize the following techniques: i) a multi-step search process to ensure relevant sources are not missed (an initial limited search strategy favoring sensitivity over precision will be conducted first and inform potential revisions making 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.

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).

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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
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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
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6 manuscript for publication.
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- 11 **Patient Consent:** Not required.
- 12 **License Statement:** I, the Submitting Author has the right to grant and does grant on behalf of
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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

SCOPING REVIEW PROTOCOL

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 I ² , 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

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.

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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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 schizo affective 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

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BMJ Open

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

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2021-059826.R1
Article Type:	Protocol
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Primary Subject Heading:	Mental health
Secondary Subject Heading:	Health services research
Keywords:	MENTAL HEALTH, PSYCHIATRY, PUBLIC HEALTH

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

7
8 Amy E. Nesbitt, MSc (amy.nesbitt@mail.utoronto.ca)^{a*}
9

10 Catherine M. Sabiston, PhD (catherine.sabiston@utoronto.ca)^b
11

12 Melissa L. deJonge, MSc (melissa.dejonge@utoronto.ca)^b
13

14
15 Skye Barbic, PhD (skye.barbic@ubc.ca)^{c,d}
16

17 Nicole Kozloff, MD, SM (nicole.kozloff@camh.ca)^e
18

19 Emily Nalder, PhD (emily.nalder@utoronto.ca)^{a,f}
20
21

22 ^a Rehabilitation Sciences Institute, University of Toronto (500 University Avenue, Toronto, ON,
23 Canada, M5G 1V7)
24

25 ^b Faculty of Kinesiology and Physical Education, University of Toronto (55 Harbord Street,
26 Toronto, ON, Canada, M5S 2W6)
27

28 ^c Department of Occupational Science and Occupational Therapy, University of British
29 Columbia (T325 - 2211 Wesbrook Mall, Vancouver, BC, Canada, V6T 2B5)
30

31 ^d Foundry (Vancouver, BC, Canada)
32

33 ^e Centre for Addiction and Mental Health (250 College Street, Toronto, ON, Canada, M5T 1R8)
34

35 ^f Department of Occupational Science and Occupational Therapy, University of Toronto (500
36 University Avenue, Toronto, ON, Canada, M5G 1V7)
37

38 *Corresponding author: Amy E. Nesbitt, MSc, OT Reg. (Ont.). Rehabilitation Sciences Institute,
39 University of Toronto, 500 University Avenue, Toronto, ON, Canada, M5G 1V7. Phone: 416-
40 978-5837. Fax: 416-971-2118. Email: amy.nesbitt@mail.utoronto.ca
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44 **Keywords:** adolescent, young adult, resilience, mental health, review
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46 **Word Count:** 4942
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SCOPING REVIEW PROTOCOL

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

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10 **Introduction:** Transition-age youth (16-29 years old) are disproportionately affected by the
11 onset, impact and burden of serious mental illness (SMI; e.g., depression, bipolar disorder,
12 schizophrenia spectrum disorders). Emerging evidence has increasingly highlighted the concept
13 of resilience in mental health promotion and treatment approaches for this population. A
14 comprehensive synthesis of existing evidence is needed to enhance conceptual clarity in this
15 area, identify knowledge gaps, and inform future research and practice. As such, the present
16 scoping review is guided by the following questions: How has resilience been conceptualized
17 and operationalized in the transition-age youth mental health literature? What factors influence
18 resilience among transition-age youth with SMI, and what outcomes have been studied within
19 the context of transition-age youth's mental health recovery?

20 **Methods and analysis:** The present protocol will follow six key stages, in accordance with
21 Arksey and O'Malley's (2005) established scoping review methodology and recent iterations of
22 this framework, and has been registered with Open Science Framework (<https://osf.io/rzfc5>). The
23 protocol and review process will be carried out by a multidisciplinary team in consultation with
24 community stakeholders. A comprehensive search strategy will be conducted across multiple
25 electronic databases to identify relevant empirical literature. Included sources will address the
26 population of transition-age youth (16-29 years) diagnosed with SMI, the concept of resilience
27 (in any context), and will report original research written in English. Data screening and
28 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
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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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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
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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.

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).

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).

18 **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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(52,53). Studies with participants experiencing co-morbid disorders which are not the primary focus will also be included in this scoping review.

Concept. While definitions of resilience vary across different research disciplines, most definitions refer to positive adaptation in the face of significant challenge, risk or adversity as central or defining features, and acknowledge the importance of sociocultural factors in shaping experiences and understandings of resilience (19). For the purpose of this scoping review, resilience is defined as a dynamic process that unfolds over time, involving multiple resilience factors that interact to enable individuals to negotiate or recover from stressful life events / adversity (e.g., one's personal characteristics, environment and support networks). Studies that adopt this process-oriented perspective will be included, and the following core elements of resilience and resilience factors will be explored: adversity, risks, internal and external protective factors, self-regulatory strategies, adaptation and resilience-related outcomes (25,30). Studies that focus solely on a trait perspective of resilience, similar constructs (e.g., ego-resilience, psychological capital) or biological / genetic / neurophysiological factors will be omitted. Lastly, given our focus on psychological resilience at the person- or individual-level, studies evaluating family- or community-level resilience will not be included.

Context. While “clinical recovery” is often defined as a reduction in SMI symptoms or impairment (typically in clinical / health care settings), “personal recovery” refers to the processes that contribute to transition-age youth's hope, development, and engagement in meaningful activities (even while facing SMI) and emphasizes the importance of multiple contexts where this occurs (e.g., spanning personal, familial, social and institutional environments) (35). The present review considers mental health recovery primarily through a 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').

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.

Eligibility for Stage 1 Title/Abstract Review:

12 **Inclusion criteria.** a) Population: Refers to transition-age youth diagnosed or living with
13 SMI (as defined previously). b) Concept: Resilience / resiliency is identified as a key focus
14 within the purpose / objectives / research question, outcome measure, and/or findings. c)
15 Context: Is set in any individual, community or health-oriented context of mental health
16 recovery. d) Type of source: Peer reviewed original research (quantitative, qualitative, mixed
17 method). e) Publication language / date: Written in English and published between 2000 and
18 2022.

19 **Exclusion criteria.** a) Population: Refers to non-clinical population, general population,
20 children / youth (age 0-14), or childhood developmental disorder. b) Concept: Resilience /
21 resiliency is not an explicit focus. c) Type of source: Peer reviewed articles with the primary aim
22 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
3 charting form (Table 1) will be used to organize and interpret relevant details from the selected
4
5 sources in line with our research question and objectives. The following information will be
6
7 charted in Excel: i) general document details, ii) key characteristics of empirical studies (e.g.,
8
9 research design, methods, intervention details, youth engagement, intersectional approaches,
10
11 study population, context), iii) how resilience was conceptualized and operationalized (e.g.,
12
13 definition, theoretical framework / model, academic discipline, measures), and iv) resilience
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15 factors and outcomes identified.
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2 The preliminary chart form was also developed in accordance with Greenhalgh and
3
4 colleagues' (2005) meta-narrative approach (58). Specifically, this meta-narrative approach was
5
6 originally created to detail how a field of study or key concept has evolved over time and to
7
8 explore potential tensions that exist across research traditions (or "paradigms") within
9
10 knowledge syntheses (58). A meta-narrative approach is recommended when examining
11
12 complex, heterogeneous bodies of literature where a key concept of interest has been
13
14 conceptualized and investigated through different research traditions, and conceptual clarity is
15
16 needed (58). According to Greenhalgh et al. (2005), a *research tradition* refers to a paradigm of
17
18 inquiry, undertaken by researchers, that shares four key interrelated dimensions (conceptual,
19
20 theoretical, methodological, instrumental), and thus shows distinct disciplinary roots, scope and
21
22 key concepts (58). Research traditions are often characterized and influenced by seminal
23
24 conceptual papers that inform the direction and focus of future work (58). Alternatively, an
25
26 *academic discipline* is defined as a broader field of study or branch of knowledge (e.g.,
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28 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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measures, main findings). Resilience factors and outcomes will be summarized in a table or figure. A creative graphical / visual depiction of identified research traditions and timeframe will also be used to “map” key findings of the review (58). In sum, the analytic approach has been developed to facilitate conceptual / theoretical advancements in resilience research, identify key knowledge gaps, and highlight potential future directions in the study of transition-age youth resilience and mental health. The presentation and reporting of results (through summaries, tables, and visuals) will be discussed among the multidisciplinary review team and community stakeholder group. Consistent input from the perspective of researchers, clinicians, and transition-age youth with SMI will enhance the relevance and utility of the review findings.

Stage 6: Stakeholder Consultation

The overarching goal of the current scoping review is to systematically explore the current extent and breadth of peer reviewed research on resilience among transition-age youth diagnosed with SMI. Particularly, efforts have been made within the scoping review methodology to provide a holistic and coherent overview of evidence that can inform future research, education, and practice (41–43). In order to achieve these goals, the multidisciplinary review team has been formed to include knowledgeable stakeholders (researchers, clinicians, knowledge users) with backgrounds in psychiatry / early intervention services (NK), occupational therapy / resiliency in rehabilitation sciences (AN, SB, EN), and kinesiology / young adult mental health programming (MD, CS).

Following Levac and colleagues’ (2010) recommendations, this scoping review will also consult with community stakeholders to gain the perspectives of transition-age youth with lived experience of SMI, clinicians, and other mental health / resiliency researchers (43). To achieve 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
3 Audio recordings will be transcribed verbatim to complete directed content analysis (66).
4
5 Complete methods and results will be detailed in the final report (including stakeholder group
6 characteristics, sample size, data collection tools, analysis, and findings) (43). Several
7 recommendations to enhance the trustworthiness of qualitative content analysis will be employed
8 (67,68), including: (i) member checking, (ii) clear description of the context and participant
9 characteristics, (iii) transparent reporting of the coding process and agreement, and (iv) use of
10 illustrative quotes, as well as frequencies / counts where appropriate, to summarize results.

11
12 Guided by scoping review practices, stakeholder engagement will promote a more
13 collaborative approach, emphasize the voices of young people and knowledge users, and
14 ultimately maximize the potential contribution of the research (43). Particularly, involving
15 transition-age youth with SMI as part of the review process will facilitate feedback on the
16 relevance and usefulness of the review findings. This is considered essential for not only
17 advancing research and practice in youth mental health, but also addressing recent concerns of
18 the “weaponization” of resiliency in rehabilitation (e.g., adding stress, pressure, or individual
19 onus to “become resilient” at times of increased vulnerability) by drawing on the values and
20 perspectives of young people (69–71).

Patient and Public Involvement

21 Patients and members of the public have not been involved in the design of this scoping
22 review and the protocol development. However, the perspectives of transition-age youth who
23 have experienced SMI will be gathered during the review process. Their feedback will inform
24 our methods, interpretation of results, and knowledge dissemination plan.

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

8 The distinct impact and burden of SMI among young people has been increasingly
9 recognized among researchers and clinicians. This has provoked new research and care
10 approaches centered on building resiliency. Despite a recent surge in examinations of resilience
11 in the context of transition-age youth mental health recovery, there remains a lack of
12 understanding on the core meanings, processes and outcomes of resilience among this
13 population. To our knowledge, this will be the first scoping review to systematically examine
14 how resilience is conceptualized and operationalized among transition-age youth with SMI, and
15 explore what resilience factors and outcomes have been studied. A comprehensive synthesis,
16 developed in collaboration with community stakeholders, is needed to advance research and
17 clinical practice.

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- 1 **Contributorship Statement:** AN led the conceptualization of this review and drafted the
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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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- 10 **Data Sharing Statement:** No data are associated with this article.
- 11 **Patient Consent:** Not required.
- 12 **License Statement:** I, the Submitting Author has the right to grant and does grant on behalf of
13 all authors of the Work (as defined in the below author licence), an exclusive licence and/or a
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19 publish the Work in BMJ Open and any other BMJ products and to exploit all rights, as set out in
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SCOPING REVIEW PROTOCOL

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 I ² , 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

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.

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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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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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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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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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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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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		<p>“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)</p>
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 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 “psychotic disorder*” or “mood disorder*” or “depressive disorder*” or “affective disorder*” or depression or “psychotic 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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BMJ Open

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

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Primary Subject Heading:	Mental health
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Keywords:	MENTAL HEALTH, PSYCHIATRY, PUBLIC HEALTH

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1 **Understanding resilience among transition-age youth with serious mental illness: Protocol**
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5 **for a scoping review**
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7
8 Amy E. Nesbitt, MSc (amy.nesbitt@mail.utoronto.ca)^{a*}
9

10 Catherine M. Sabiston, PhD (catherine.sabiston@utoronto.ca)^b
11

12 Melissa L. deJonge, MSc (melissa.dejonge@utoronto.ca)^b
13

14 Skye Barbic, PhD (skye.barbic@ubc.ca)^{c,d}
15

16 Nicole Kozloff, MD, SM (nicole.kozloff@camh.ca)^e
17

18 Emily Nalder, PhD (emily.nalder@utoronto.ca)^{a,f}
19

20
21
22 ^a Rehabilitation Sciences Institute, University of Toronto (500 University Avenue, Toronto, ON,
23 Canada, M5G 1V7)
24

25 ^b Faculty of Kinesiology and Physical Education, University of Toronto (55 Harbord Street,
26 Toronto, ON, Canada, M5S 2W6)
27

28 ^c Department of Occupational Science and Occupational Therapy, University of British
29 Columbia (T325 - 2211 Wesbrook Mall, Vancouver, BC, Canada, V6T 2B5)
30

31 ^d Foundry (Vancouver, BC, Canada)
32

33 ^e Centre for Addiction and Mental Health (250 College Street, Toronto, ON, Canada, M5T 1R8)
34

35 ^f Department of Occupational Science and Occupational Therapy, University of Toronto (500
36 University Avenue, Toronto, ON, Canada, M5G 1V7)
37

38 *Corresponding author: Amy E. Nesbitt, MSc, OT Reg. (Ont.). Rehabilitation Sciences Institute,
39 University of Toronto, 500 University Avenue, Toronto, ON, Canada, M5G 1V7. Phone: 416-
40 978-5837. Fax: 416-971-2118. Email: amy.nesbitt@mail.utoronto.ca
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44 **Keywords:** adolescent, young adult, resilience, mental health, review
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46 **Word Count:** 4949
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SCOPING REVIEW PROTOCOL

1 **Understanding resilience among transition-age youth with serious mental illness: Protocol**
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7
8 **Abstract**

9
10 **Introduction:** Transition-age youth (16-29 years old) are disproportionately affected by the
11 onset, impact and burden of serious mental illness (SMI; e.g., depression, bipolar disorder,
12 schizophrenia spectrum disorders). Emerging evidence has increasingly highlighted the concept
13 of resilience in mental health promotion and treatment approaches for this population. A
14 comprehensive synthesis of existing evidence is needed to enhance conceptual clarity in this
15 area, identify knowledge gaps, and inform future research and practice. As such, the present
16 scoping review is guided by the following questions: How has resilience been conceptualized
17 and operationalized in the transition-age youth mental health literature? What factors influence
18 resilience among transition-age youth with SMI, and what outcomes have been studied within
19 the context of transition-age youth's mental health recovery?

20 **Methods and analysis:** The present protocol will follow six key stages, in accordance with
21 Arksey and O'Malley's (2005) established scoping review methodology and recent iterations of
22 this framework, and has been registered with Open Science Framework (<https://osf.io/rzfc5>). The
23 protocol and review process will be carried out by a multidisciplinary team in consultation with
24 community stakeholders. A comprehensive search strategy will be conducted across multiple
25 electronic databases to identify relevant empirical literature. Included sources will address the
26 population of transition-age youth (16-29 years) diagnosed with SMI, the concept of resilience
27 (in any context), and will report original research written in English. Data screening and
28 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
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7 with tabular and graphical summaries.

8 **Ethics and dissemination:** Institutional research ethics board approval was obtained to complete
9
10 the community stakeholder consultation stage of this review. Results will be disseminated
11
12 through conference presentations, publications, and user-friendly reports and graphics.
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Strengths and limitations of this study

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19 • This scoping review study will follow recent recommendations and guidance documents
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21 to promote methodological rigor and has been registered to enhance transparency.
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23
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25 • Variability in how the population (transition-age youth) and concept (resilience) have
26
27 been defined, as well as restrictions to the search strategy based on language, date, and
28
29 publication type may limit the breadth of the search.
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- 31
32 • An assessment of the methodological quality of included studies will not be conducted
33
34 which limits the types of conclusions and implications that can be drawn from the review.
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37 • We will apply an iterative and team-based approach, in consultation with community
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39 stakeholders (transition-age youth with SMI, clinicians, researchers) to improve the
40
41 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

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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.

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).

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).

18 **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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(52,53). Studies with participants experiencing co-morbid disorders which are not the primary focus will also be included in this scoping review.

Concept. While definitions of resilience vary across different research disciplines, most definitions refer to positive adaptation in the face of significant challenge, risk or adversity as central or defining features, and acknowledge the importance of sociocultural factors in shaping experiences and understandings of resilience (19). For the purpose of this scoping review, resilience is defined as a dynamic process that unfolds over time, involving multiple resilience factors that interact to enable individuals to negotiate or recover from stressful life events / adversity (e.g., one's personal characteristics, environment and support networks). Studies that adopt this process-oriented perspective will be included, and the following core elements of resilience and resilience factors will be explored: adversity, risks, internal and external protective factors, self-regulatory strategies, adaptation and resilience-related outcomes (25,30). Studies that focus solely on a trait perspective of resilience, similar constructs (e.g., ego-resilience, psychological capital) or biological / genetic / neurophysiological factors will be omitted. Lastly, given our focus on psychological resilience at the person- or individual-level, studies evaluating family- or community-level resilience will not be included.

Context. While “clinical recovery” is often defined as a reduction in SMI symptoms or impairment (typically in clinical / health care settings), “personal recovery” refers to the processes that contribute to transition-age youth's hope, development, and engagement in meaningful activities (even while facing SMI) and emphasizes the importance of multiple contexts where this occurs (e.g., spanning personal, familial, social and institutional environments) (35). The present review considers mental health recovery primarily through a 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’).

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.

Eligibility for Stage 1 Title/Abstract Review:

12 **Inclusion criteria.** a) Population: Refers to transition-age youth diagnosed or living with
13 SMI (as defined previously). b) Concept: Resilience / resiliency is identified as a key focus
14 within the purpose / objectives / research question, outcome measure, and/or findings. c)
15 Context: Is set in any individual, community or health-oriented context of mental health
16 recovery. d) Type of source: Peer reviewed original research (quantitative, qualitative, mixed
17 method). e) Publication language / date: Written in English and published between 2000 and
18 2022.

19 **Exclusion criteria.** a) Population: Refers to non-clinical population, general population,
20 children / youth (age 0-14), or childhood developmental disorder. b) Concept: Resilience /
21 resiliency is not an explicit focus. c) Type of source: Peer reviewed articles with the primary aim
22 of developing, reporting or validating the psychometric properties of survey measures /
23

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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
3 charting form (Table 1) will be used to organize and interpret relevant details from the selected
4
5 sources in line with our research question and objectives. The following information will be
6
7 charted in Excel: i) general document details, ii) key characteristics of empirical studies (e.g.,
8
9 research design, methods, intervention details, youth engagement, intersectional approaches,
10
11 study population, context), iii) how resilience was conceptualized and operationalized (e.g.,
12
13 definition, theoretical framework / model, academic discipline, measures), and iv) resilience
14
15 factors and outcomes identified.
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2 The preliminary chart form was also developed in accordance with Greenhalgh and
3
4 colleagues' (2005) meta-narrative approach (58). Specifically, this meta-narrative approach was
5
6 originally created to detail how a field of study or key concept has evolved over time and to
7
8 explore potential tensions that exist across research traditions (or "paradigms") within
9
10 knowledge syntheses (58). A meta-narrative approach is recommended when examining
11
12 complex, heterogeneous bodies of literature where a key concept of interest has been
13
14 conceptualized and investigated through different research traditions, and conceptual clarity is
15
16 needed (58). According to Greenhalgh et al. (2005), a *research tradition* refers to a paradigm of
17
18 inquiry, undertaken by researchers, that shares four key interrelated dimensions (conceptual,
19
20 theoretical, methodological, instrumental), and thus shows distinct disciplinary roots, scope and
21
22 key concepts (58). Research traditions are often characterized and influenced by seminal
23
24 conceptual papers that inform the direction and focus of future work (58). Alternatively, an
25
26 *academic discipline* is defined as a broader field of study or branch of knowledge (e.g.,
27
28 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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measures, main findings). Resilience factors and outcomes will be summarized in a table or figure. A creative graphical / visual depiction of identified research traditions and timeframe will also be used to “map” key findings of the review (58). In sum, the analytic approach has been developed to facilitate conceptual / theoretical advancements in resilience research, identify key knowledge gaps, and highlight potential future directions in the study of transition-age youth resilience and mental health. The presentation and reporting of results (through summaries, tables, and visuals) will be discussed among the multidisciplinary review team and community stakeholder group. Consistent input from the perspective of researchers, clinicians, and transition-age youth with SMI will enhance the relevance and utility of the review findings.

Stage 6: Stakeholder Consultation

The overarching goal of the current scoping review is to systematically explore the current extent and breadth of peer reviewed research on resilience among transition-age youth diagnosed with SMI. Particularly, efforts have been made within the scoping review methodology to provide a holistic and coherent overview of evidence that can inform future research, education, and practice (41–43). In order to achieve these goals, the multidisciplinary review team has been formed to include knowledgeable stakeholders (researchers, clinicians, knowledge users) with backgrounds in psychiatry / early intervention services (NK), occupational therapy / resiliency in rehabilitation sciences (AN, SB, EN), and kinesiology / young adult mental health programming (MD, CS).

Following Levac and colleagues’ (2010) recommendations, this scoping review will also consult with community stakeholders to gain the perspectives of transition-age youth with lived experience of SMI, clinicians, and other mental health / resiliency researchers (43). To achieve 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
3 Audio recordings will be transcribed verbatim to complete directed content analysis (66).
4
5 Complete methods and results will be detailed in the final report (including stakeholder group
6 characteristics, sample size, data collection tools, analysis, and findings) (43). Several
7 recommendations to enhance the trustworthiness of qualitative content analysis will be employed
8 (67,68), including: (i) member checking, (ii) clear description of the context and participant
9 characteristics, (iii) transparent reporting of the coding process and agreement, and (iv) use of
10 illustrative quotes, as well as frequencies / counts where appropriate, to summarize results.

11
12 Guided by scoping review practices, stakeholder engagement will promote a more
13 collaborative approach, emphasize the voices of young people and knowledge users, and
14 ultimately maximize the potential contribution of the research (43). Particularly, involving
15 transition-age youth with SMI as part of the review process will facilitate feedback on the
16 relevance and usefulness of the review findings. This is considered essential for not only
17 advancing research and practice in youth mental health, but also addressing recent concerns of
18 the “weaponization” of resiliency in rehabilitation (e.g., adding stress, pressure, or individual
19 onus to “become resilient” at times of increased vulnerability) by drawing on the values and
20 perspectives of young people (69–71).

Patient and Public Involvement

21 Patients and members of the public have not been involved in the design of this scoping
22 review and the protocol development. However, the perspectives of transition-age youth who
23 have experienced SMI will be gathered during the review process. Their feedback will inform
24 our methods, interpretation of results, and knowledge dissemination plan.

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

8
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
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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.
- 12 **License Statement:** I, the Submitting Author has the right to grant and does grant on behalf of
13 all authors of the Work (as defined in the below author licence), an exclusive licence and/or a
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19 publish the Work in BMJ Open and any other BMJ products and to exploit all rights, as set out in
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SCOPING REVIEW PROTOCOL

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

SCOPING REVIEW PROTOCOL

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 I ² , 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

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")

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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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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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		<p>“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)</p>
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 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

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2021-059826.R3
Article Type:	Protocol
Date Submitted by the Author:	27-Jul-2022
Complete List of Authors:	Nesbitt, Amy; University of Toronto, Rehabilitation Sciences Institute Sabiston, Catherine; University of Toronto, Faculty of Kinesiology and Physical Education deJonge, Melissa; University of Toronto, Faculty of Kinesiology and Physical Education Barbic, Skye; The University of British Columbia, Occupational Science and Occupational Therapy; Foundry Kozloff, Nicole; Centre for Addiction and Mental Health; University of Toronto, Department of Psychiatry Nalder, Emily; University of Toronto, Occupational Science and Occupational Therapy; University of Toronto, Rehabilitation Sciences Institute
Primary Subject Heading:	Mental health
Secondary Subject Heading:	Health services research
Keywords:	MENTAL HEALTH, PSYCHIATRY, PUBLIC HEALTH

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Manuscripts

SCOPING REVIEW PROTOCOL

1 **Understanding resilience among transition-age youth with serious mental illness: Protocol**
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4
5 **for a scoping review**
6

7
8 Amy E. Nesbitt, MSc (amy.nesbitt@mail.utoronto.ca)^{a*}
9

10 Catherine M. Sabiston, PhD (catherine.sabiston@utoronto.ca)^b
11

12 Melissa L. deJonge, MSc (melissa.dejonge@utoronto.ca)^b
13

14 Skye Barbic, PhD (skye.barbic@ubc.ca)^{c,d}
15

16 Nicole Kozloff, MD, SM (nicole.kozloff@camh.ca)^e
17

18 Emily Nalder, PhD (emily.nalder@utoronto.ca)^{a,f}
19

20
21
22 ^a Rehabilitation Sciences Institute, University of Toronto (500 University Avenue, Toronto, ON,
23 Canada, M5G 1V7)
24

25 ^b Faculty of Kinesiology and Physical Education, University of Toronto (55 Harbord Street,
26 Toronto, ON, Canada, M5S 2W6)
27

28 ^c Department of Occupational Science and Occupational Therapy, University of British
29 Columbia (T325 - 2211 Wesbrook Mall, Vancouver, BC, Canada, V6T 2B5)
30

31 ^d Foundry (Vancouver, BC, Canada)
32

33 ^e Centre for Addiction and Mental Health (250 College Street, Toronto, ON, Canada, M5T 1R8)
34

35 ^f Department of Occupational Science and Occupational Therapy, University of Toronto (500
36 University Avenue, Toronto, ON, Canada, M5G 1V7)
37

38 *Corresponding author: Amy E. Nesbitt, MSc, OT Reg. (Ont.). Rehabilitation Sciences Institute,
39 University of Toronto, 500 University Avenue, Toronto, ON, Canada, M5G 1V7. Phone: 416-
40 978-5837. Fax: 416-971-2118. Email: amy.nesbitt@mail.utoronto.ca
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43
44 **Keywords:** adolescent, young adult, resilience, mental health, review
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46 **Word Count:** 4959
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SCOPING REVIEW PROTOCOL

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

7
8 **Abstract**

9
10 **Introduction:** Transition-age youth (16-29 years old) are disproportionately affected by the
11 onset, impact and burden of serious mental illness (SMI; e.g., depression, bipolar disorder,
12 schizophrenia spectrum disorders). Emerging evidence has increasingly highlighted the concept
13 of resilience in mental health promotion and treatment approaches for this population. A
14 comprehensive synthesis of existing evidence is needed to enhance conceptual clarity in this
15 area, identify knowledge gaps, and inform future research and practice. As such, the present
16 scoping review is guided by the following questions: How has resilience been conceptualized
17 and operationalized in the transition-age youth mental health literature? What factors influence
18 resilience among transition-age youth with SMI, and what outcomes have been studied within
19 the context of transition-age youth's mental health recovery?

20 **Methods and analysis:** The present protocol will follow six key stages, in accordance with
21 Arksey and O'Malley's (2005) established scoping review methodology and recent iterations of
22 this framework, and has been registered with Open Science Framework (<https://osf.io/rzfc5>). The
23 protocol and review process will be carried out by a multidisciplinary team in consultation with
24 community stakeholders. A comprehensive search strategy will be conducted across multiple
25 electronic databases to identify relevant empirical literature. Included sources will address the
26 population of transition-age youth (16-29 years) diagnosed with SMI, the concept of resilience
27 (in any context), and will report original research written in English. Data screening and
28 extraction will be completed by at least two independent reviewers. Following meta-narrative

SCOPING REVIEW PROTOCOL

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

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).

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).

18 **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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(52,53). Studies with participants experiencing co-morbid disorders which are not the primary focus will also be included in this scoping review.

Concept. While definitions of resilience vary across different research disciplines, most definitions refer to positive adaptation in the face of significant challenge, risk or adversity as central or defining features, and acknowledge the importance of sociocultural factors in shaping experiences and understandings of resilience (19). For the purpose of this scoping review, resilience is defined as a dynamic process that unfolds over time, involving multiple resilience factors that interact to enable individuals to negotiate or recover from stressful life events / adversity (e.g., one's personal characteristics, environment and support networks). Studies that adopt this process-oriented perspective will be included, and the following core elements of resilience and resilience factors will be explored: adversity, risks, internal and external protective factors, self-regulatory strategies, adaptation and resilience-related outcomes (25,30). Studies that focus solely on a trait perspective of resilience, similar constructs (e.g., ego-resilience, psychological capital) or biological / genetic / neurophysiological factors will be omitted. Lastly, given our focus on psychological resilience at the person- or individual-level, studies evaluating family- or community-level resilience will not be included.

Context. While “clinical recovery” is often defined as a reduction in SMI symptoms or impairment (typically in clinical / health care settings), “personal recovery” refers to the processes that contribute to transition-age youth's hope, development, and engagement in meaningful activities (even while facing SMI) and emphasizes the importance of multiple contexts where this occurs (e.g., spanning personal, familial, social and institutional environments) (35). The present review considers mental health recovery primarily through a 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').

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.

Eligibility for Stage 1 Title/Abstract Review:

12 **Inclusion criteria.** a) Population: Refers to transition-age youth diagnosed or living with
13 SMI (as defined previously). b) Concept: Resilience / resiliency is identified as a key focus
14 within the purpose / objectives / research question, outcome measure, and/or findings. c)
15 Context: Is set in any individual, community or health-oriented context of mental health
16 recovery. d) Type of source: Peer reviewed original research (quantitative, qualitative, mixed
17 method). e) Publication language / date: Written in English and published between 2000 and
18 2022.

19 **Exclusion criteria.** a) Population: Refers to non-clinical population, general population,
20 children / youth (age 0-14), or childhood developmental disorder. b) Concept: Resilience /
21 resiliency is not an explicit focus. c) Type of source: Peer reviewed articles with the primary aim
22 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
3 charting form (Table 1) will be used to organize and interpret relevant details from the selected
4
5 sources in line with our research question and objectives. The following information will be
6
7 charted in Excel: i) general document details, ii) key characteristics of empirical studies (e.g.,
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9 research design, methods, intervention details, youth engagement, intersectional approaches,
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11 study population, context), iii) how resilience was conceptualized and operationalized (e.g.,
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13 definition, theoretical framework / model, academic discipline, measures), and iv) resilience
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15 factors and outcomes identified.
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2 The preliminary chart form was also developed in accordance with Greenhalgh and
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4 colleagues' (2005) meta-narrative approach (58). Specifically, this meta-narrative approach was
5
6 originally created to detail how a field of study or key concept has evolved over time and to
7
8 explore potential tensions that exist across research traditions (or "paradigms") within
9
10 knowledge syntheses (58). A meta-narrative approach is recommended when examining
11
12 complex, heterogeneous bodies of literature where a key concept of interest has been
13
14 conceptualized and investigated through different research traditions, and conceptual clarity is
15
16 needed (58). According to Greenhalgh et al. (2005), a *research tradition* refers to a paradigm of
17
18 inquiry, undertaken by researchers, that shares four key interrelated dimensions (conceptual,
19
20 theoretical, methodological, instrumental), and thus shows distinct disciplinary roots, scope and
21
22 key concepts (58). Research traditions are often characterized and influenced by seminal
23
24 conceptual papers that inform the direction and focus of future work (58). Alternatively, an
25
26 *academic discipline* is defined as a broader field of study or branch of knowledge (e.g.,
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28 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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measures, main findings). Resilience factors and outcomes will be summarized in a table or figure. A creative graphical / visual depiction of identified research traditions and timeframe will also be used to “map” key findings of the review (58). In sum, the analytic approach has been developed to facilitate conceptual / theoretical advancements in resilience research, identify key knowledge gaps, and highlight potential future directions in the study of transition-age youth resilience and mental health. The presentation and reporting of results (through summaries, tables, and visuals) will be discussed among the multidisciplinary review team and community stakeholder group. Consistent input from the perspective of researchers, clinicians, and transition-age youth with SMI will enhance the relevance and utility of the review findings.

Stage 6: Stakeholder Consultation

The overarching goal of the current scoping review is to systematically explore the current extent and breadth of peer reviewed research on resilience among transition-age youth diagnosed with SMI. Particularly, efforts have been made within the scoping review methodology to provide a holistic and coherent overview of evidence that can inform future research, education, and practice (41–43). In order to achieve these goals, the multidisciplinary review team has been formed to include knowledgeable stakeholders (researchers, clinicians, knowledge users) with backgrounds in psychiatry / early intervention services (NK), occupational therapy / resiliency in rehabilitation sciences (AN, SB, EN), and kinesiology / young adult mental health programming (MD, CS).

Following Levac and colleagues’ (2010) recommendations, this scoping review will also consult with community stakeholders to gain the perspectives of transition-age youth with lived experience of SMI, clinicians, and other mental health / resiliency researchers (43). To achieve 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

SCOPING REVIEW PROTOCOL

1 two members of the review team (AN, MD) virtually using a semi-structured interview guide.
2
3 Audio recordings will be transcribed verbatim to complete directed content analysis (66).
4
5 Complete methods and results will be detailed in the final report (including stakeholder group
6 characteristics, sample size, data collection tools, analysis, and findings) (43). Several
7 recommendations to enhance the trustworthiness of qualitative content analysis will be employed
8 (67,68), including: (i) member checking, (ii) clear description of the context and participant
9 characteristics, (iii) transparent reporting of the coding process and agreement, and (iv) use of
10 illustrative quotes, as well as frequencies / counts where appropriate, to summarize results.

11
12 Guided by scoping review practices, stakeholder engagement will promote a more
13 collaborative approach, emphasize the voices of young people and knowledge users, and
14 ultimately maximize the potential contribution of the research (43). Particularly, involving
15 transition-age youth with SMI as part of the review process will facilitate feedback on the
16 relevance and usefulness of the review findings. This is considered essential for not only
17 advancing research and practice in youth mental health, but also addressing recent concerns of
18 the “weaponization” of resiliency in rehabilitation (e.g., adding stress, pressure, or individual
19 onus to “become resilient” at times of increased vulnerability) by drawing on the values and
20 perspectives of young people (69–71).

Patient and Public Involvement

21 Patients and members of the public have not been involved in the design of this scoping
22 review and the protocol development. However, the perspectives of transition-age youth who
23 have experienced SMI will be gathered during the review process. Their feedback will inform
24 our methods, interpretation of results, and knowledge dissemination plan.

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

9
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.

SCOPING REVIEW PROTOCOL

- 1 **Contributorship Statement:** AN led the conceptualization of this review and drafted the
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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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9 commercial or not-for-profit sectors.
- 10 **Data Sharing Statement:** No data are associated with this article.
- 11 **Patient Consent:** Not required.
- 12 **License Statement:** I, the Submitting Author has the right to grant and does grant on behalf of
13 all authors of the Work (as defined in the below author licence), an exclusive licence and/or a
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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 I ² , 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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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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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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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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		<p>“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)</p>
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 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 "psychotic disorder*" or "mood disorder*" or "depressive disorder*" or "affective disorder*" or depression or "psychotic disorder*" or "dysthymia 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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BMJ Open

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

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Manuscript ID	bmjopen-2021-059826.R4
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Primary Subject Heading:	Mental health
Secondary Subject Heading:	Health services research
Keywords:	MENTAL HEALTH, PSYCHIATRY, PUBLIC HEALTH

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Manuscripts

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

7
8 Amy E. Nesbitt, MSc (amy.nesbitt@mail.utoronto.ca)^{a*}
9

10 Catherine M. Sabiston, PhD (catherine.sabiston@utoronto.ca)^b
11

12 Melissa L. deJonge, MSc (melissa.dejonge@utoronto.ca)^b
13

14 Skye Barbic, PhD (skye.barbic@ubc.ca)^{c,d}
15

16 Nicole Kozloff, MD, SM (nicole.kozloff@camh.ca)^e
17

18 Emily Nalder, PhD (emily.nalder@utoronto.ca)^{a,f}
19
20

21
22 ^a Rehabilitation Sciences Institute, University of Toronto (500 University Avenue, Toronto, ON,
23 Canada, M5G 1V7)
24

25 ^b Faculty of Kinesiology and Physical Education, University of Toronto (55 Harbord Street,
26 Toronto, ON, Canada, M5S 2W6)
27

28 ^c Department of Occupational Science and Occupational Therapy, University of British
29 Columbia (T325 - 2211 Wesbrook Mall, Vancouver, BC, Canada, V6T 2B5)
30

31 ^d Foundry (Vancouver, BC, Canada)
32

33 ^e Centre for Addiction and Mental Health (250 College Street, Toronto, ON, Canada, M5T 1R8)
34

35 ^f Department of Occupational Science and Occupational Therapy, University of Toronto (500
36 University Avenue, Toronto, ON, Canada, M5G 1V7)
37

38 *Corresponding author: Amy E. Nesbitt, MSc, OT Reg. (Ont.). Rehabilitation Sciences Institute,
39 University of Toronto, 500 University Avenue, Toronto, ON, Canada, M5G 1V7. Phone: 416-
40 978-5837. Fax: 416-971-2118. Email: amy.nesbitt@mail.utoronto.ca
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44 **Keywords:** adolescent, young adult, resilience, mental health, review
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46 **Word Count:** 4838
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SCOPING REVIEW PROTOCOL

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

7
8 **Abstract**

9
10 **Introduction:** Transition-age youth (16-29 years old) are disproportionately affected by the
11 onset, impact and burden of serious mental illness (SMI; e.g., depression, bipolar disorder,
12 schizophrenia spectrum disorders). Emerging evidence has increasingly highlighted the concept
13 of resilience in mental health promotion and treatment approaches for this population. A
14 comprehensive synthesis of existing evidence is needed to enhance conceptual clarity in this
15 area, identify knowledge gaps, and inform future research and practice. As such, the present
16 scoping review is guided by the following questions: How has resilience been conceptualized
17 and operationalized in the transition-age youth mental health literature? What factors influence
18 resilience among transition-age youth with SMI, and what outcomes have been studied within
19 the context of transition-age youth's mental health recovery?

20 **Methods and analysis:** The present protocol will follow six key stages, in accordance with
21 Arksey and O'Malley's (2005) established scoping review methodology and recent iterations of
22 this framework, and has been registered with Open Science Framework (<https://osf.io/rzfc5>). The
23 protocol and review process will be carried out by a multidisciplinary team in consultation with
24 community stakeholders. A comprehensive search strategy will be conducted across multiple
25 electronic databases to identify relevant empirical literature. Included sources will address the
26 population of transition-age youth (16-29 years) diagnosed with SMI, the concept of resilience
27 (in any context), and will report original research written in English. Data screening and
28 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
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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.

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.

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

SCOPING REVIEW PROTOCOL

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.

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).

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).

18 **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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(52,53). Studies with participants experiencing co-morbid disorders which are not the primary focus will also be included in this scoping review.

Concept. While definitions of resilience vary across different research disciplines, most definitions refer to positive adaptation in the face of significant challenge, risk or adversity as central or defining features, and acknowledge the importance of sociocultural factors in shaping experiences and understandings of resilience (19). For the purpose of this scoping review, resilience is defined as a dynamic process that unfolds over time, involving multiple resilience factors that interact to enable individuals to negotiate or recover from stressful life events / adversity (e.g., one's personal characteristics, environment and support networks). Studies that adopt this process-oriented perspective will be included, and the following core elements of resilience and resilience factors will be explored: adversity, risks, internal and external protective factors, self-regulatory strategies, adaptation and resilience-related outcomes (25,30). Studies that focus solely on a trait perspective of resilience, similar constructs (e.g., ego-resilience, psychological capital) or biological / genetic / neurophysiological factors will be omitted. Lastly, given our focus on psychological resilience at the person- or individual-level, studies evaluating family- or community-level resilience will not be included.

Context. While “clinical recovery” is often defined as a reduction in SMI symptoms or impairment (typically in clinical / health care settings), “personal recovery” refers to the processes that contribute to transition-age youth's hope, development, and engagement in meaningful activities (even while facing SMI) and emphasizes the importance of multiple contexts where this occurs (e.g., spanning personal, familial, social and institutional environments) (35). The present review considers mental health recovery primarily through a 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').

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.

Eligibility for Stage 1 Title/Abstract Review:

12 **Inclusion criteria.** a) Population: Refers to transition-age youth diagnosed or living with
13 SMI (as defined previously). b) Concept: Resilience / resiliency is identified as a key focus
14 within the purpose / objectives / research question, outcome measure, and/or findings. c)
15 Context: Is set in any individual, community or health-oriented context of mental health
16 recovery. d) Type of source: Peer reviewed original research (quantitative, qualitative, mixed
17 method). e) Publication language / date: Written in English and published between 2000 and
18 2022.

19 **Exclusion criteria.** a) Population: Refers to non-clinical population, general population,
20 children / youth (age 0-14), or childhood developmental disorder. b) Concept: Resilience /
21 resiliency is not an explicit focus. c) Type of source: Peer reviewed articles with the primary aim
22 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
3 charting form (Table 1) will be used to organize and interpret relevant details from the selected
4
5 sources in line with our research question and objectives. The following information will be
6
7 charted in Excel: i) general document details, ii) key characteristics of empirical studies (e.g.,
8
9 research design, methods, intervention details, youth engagement, intersectional approaches,
10
11 study population, context), iii) how resilience was conceptualized and operationalized (e.g.,
12
13 definition, theoretical framework / model, academic discipline, measures), and iv) resilience
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15 factors and outcomes identified.
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2 The preliminary chart form was also developed in accordance with Greenhalgh and
3
4 colleagues' (2005) meta-narrative approach (58). Specifically, this meta-narrative approach was
5
6 originally created to detail how a field of study or key concept has evolved over time and to
7
8 explore potential tensions that exist across research traditions (or "paradigms") within
9
10 knowledge syntheses (58). A meta-narrative approach is recommended when examining
11
12 complex, heterogeneous bodies of literature where a key concept of interest has been
13
14 conceptualized and investigated through different research traditions, and conceptual clarity is
15
16 needed (58). According to Greenhalgh et al. (2005), a *research tradition* refers to a paradigm of
17
18 inquiry, undertaken by researchers, that shares four key interrelated dimensions (conceptual,
19
20 theoretical, methodological, instrumental), and thus shows distinct disciplinary roots, scope and
21
22 key concepts (58). Research traditions are often characterized and influenced by seminal
23
24 conceptual papers that inform the direction and focus of future work (58). Alternatively, an
25
26 *academic discipline* is defined as a broader field of study or branch of knowledge (e.g.,
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28 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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measures, main findings). Resilience factors and outcomes will be summarized in a table or figure. A creative graphical / visual depiction of identified research traditions and timeframe will also be used to “map” key findings of the review (58). In sum, the analytic approach has been developed to facilitate conceptual / theoretical advancements in resilience research, identify key knowledge gaps, and highlight potential future directions in the study of transition-age youth resilience and mental health. The presentation and reporting of results (through summaries, tables, and visuals) will be discussed among the multidisciplinary review team and community stakeholder group. Consistent input from the perspective of researchers, clinicians, and transition-age youth with SMI will enhance the relevance and utility of the review findings.

Stage 6: Stakeholder Consultation

The overarching goal of the current scoping review is to systematically explore the current extent and breadth of peer reviewed research on resilience among transition-age youth diagnosed with SMI. Particularly, efforts have been made within the scoping review methodology to provide a holistic and coherent overview of evidence that can inform future research, education, and practice (41–43). In order to achieve these goals, the multidisciplinary review team has been formed to include knowledgeable stakeholders (researchers, clinicians, knowledge users) with backgrounds in psychiatry / early intervention services (NK), occupational therapy / resiliency in rehabilitation sciences (AN, SB, EN), and kinesiology / young adult mental health programming (MD, CS).

Following Levac and colleagues’ (2010) recommendations, this scoping review will also consult with community stakeholders to gain the perspectives of transition-age youth with lived experience of SMI, clinicians, and other mental health / resiliency researchers (43). To achieve 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
3 Audio recordings will be transcribed verbatim to complete directed content analysis (66).
4
5 Complete methods and results will be detailed in the final report (including stakeholder group
6 characteristics, sample size, data collection tools, analysis, and findings) (43). Several
7 recommendations to enhance the trustworthiness of qualitative content analysis will be employed
8 (67,68), including: (i) member checking, (ii) clear description of the context and participant
9 characteristics, (iii) transparent reporting of the coding process and agreement, and (iv) use of
10 illustrative quotes, as well as frequencies / counts where appropriate, to summarize results.

11
12 Guided by scoping review practices, stakeholder engagement will promote a more
13 collaborative approach, emphasize the voices of young people and knowledge users, and
14 ultimately maximize the potential contribution of the research (43). Particularly, involving
15 transition-age youth with SMI as part of the review process will facilitate feedback on the
16 relevance and usefulness of the review findings. This is considered essential for not only
17 advancing research and practice in youth mental health, but also addressing recent concerns of
18 the “weaponization” of resiliency in rehabilitation (e.g., adding stress, pressure, or individual
19 onus to “become resilient” at times of increased vulnerability) by drawing on the values and
20 perspectives of young people (69–71).

Patient and Public Involvement

21 Patients and members of the public have not been involved in the design of this scoping
22 review and the protocol development. However, the perspectives of transition-age youth who
23 have experienced SMI will be gathered during the review process. Their feedback will inform
24 our methods, interpretation of results, and knowledge dissemination plan.

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
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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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- 10 **Data Sharing Statement:** No data are associated with this article.
- 11 **Patient Consent:** Not required.
- 12 **License Statement:** I, the Submitting Author has the right to grant and does grant on behalf of
13 all authors of the Work (as defined in the below author licence), an exclusive licence and/or a
14 non-exclusive licence for contributions from authors who are: i) UK Crown employees; ii) where
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19 publish the Work in BMJ Open and any other BMJ products and to exploit all rights, as set out in
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SCOPING REVIEW PROTOCOL

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 I ² , 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](#)

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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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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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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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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")

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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 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 “psychotic disorder*” 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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