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Social prescriptions for advancing resilience in kids (SPARK): study protocol for a randomized controlled trial

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Abstract

Background Child mental health needs are rising in Canada, with over half a million young people requiring access to mental health care. Social determinants, including poverty and limited social support, contribute significantly to these difficulties. Social prescribing (SP), a non-medical intervention connecting individuals to community resources, is gaining traction in child and youth wellbeing research, though empirical evidence remains limited.

Objectives The overarching goal of the Social Prescriptions for Advancing Resilience in Kids (SPARK) study is to establish the preliminary feasibility of implementing social prescribing for children and youth on an outpatient MH waitlist. The study objectives are to determine feasibility and evaluate effectiveness.

Methods This study will recruit 170 children and youth between the ages of 11 and 17 on the waitlist for outpatient mental health support at the Children's Hospital of Eastern Ontario (CHEO) in Ottawa, Ontario, Canada. Participants will be randomly assigned to either the intervention group or educational control group. Youth in the intervention group will receive a social prescription connecting them to community-based activities of their choice, while those in the control group will receive an educational booklet on social connections. Caregivers will also be invited to take part in the study. Children, youth, and their caregivers in the control group will complete online questionnaires at baseline and again 12 weeks later, while those in the intervention group will complete them at baseline and 12 weeks after beginning the social prescribing activities. The questionnaires will address demographic information, youths' symptoms of anxiety and depression, overall wellbeing, emotional and behavioural difficulties, social connectedness, and protective factors. Additionally, children and youth, caregivers, and staff (i.e., clinicians, medical practitioners) will participate in qualitative interviews about their experiences with SP.

Discussion The findings from this study will add important knowledge about the impact of social prescribing as an approach to support the wellbeing of children and youth experiencing mental health challenges. In addition, this study will offer valuable insights into the barriers encountered and the strategies used to facilitate effective implementation of child and youth social prescribing.

Trial registration The study was registered with ClinicalTrials.gov on June 6, 2025 (NCT07022561).

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Keywords Social prescribing, Child and youth mental health, Randomized control trial

Background

Child and youth mental illness is on the rise in Canada, as 1 in 5 young people under the age of 17 years meet the criteria for a mental health (MH) disorder, costing the Canadian economy approximately $4 billion annually [1]. Currently, over half a million children and youth in Canada need mental healthcare services [1] and this number increased during the COVID-19 pandemic [2]. Despite growing need, less than one-third of children and youth in Canada receive the MH care they need, with wait times being as high as 2.5 years [3]. Additionally, access to care is often influenced by numerous social determinants, including geographic location, age, and family resources, leading to significant inequities in who receives care and when. For example, in Canada, racialized children wait twice as long for MH support compared to white children [4]. Similarly, individuals considered low-income often receive unequal care [5]. Identifying equitable approaches to support young people on MH waitlists is a youth-identified research and clinical priority [6].

Social prescribing: a community-based approach

Social prescribing (SP), which is rapidly gaining momentum, is an approach that has the potential to reduce health inequalities. A social prescription is a co-produced, non-medical treatment plan, that connects individuals to community supports [7]. There are two key components that make SP unique: (1) the co-construction of a plan based on strengths and needs, and (2) the connection to a link worker who facilitates and supports the youth in their activities. SP is a personalized approach to care that enhances connection to community and broader MH services [7]. SP can be initiated by a diverse range of health professionals. To date, research on the use of SP in pediatric MH has been limited [8] and there have been methodological and resource limitations to evaluations of SP in community settings [9]. Research is underway in the United Kingdom [10] to test the effectiveness and feasibility of implementing SP for children and youth with MH difficulties. There is a critical need for local Canadian evidence on how such interventions can be implemented, accepted by young people and their caregivers, and appropriately tailored to their specific needs as much of the existing research comes from the UK. Additionally, it is important to understand the effectiveness of this care approach in addressing mental health difficulties among youth.

Social prescribing on child and youth outcomes

Social prescribing has the potential to enhance wellbeing by targeting social factors. Social determinants of health, such as income, social support, and community engagement, have been shown to account for up to 80% of health outcomes [11] and are critical for mental health [12]. Although SP has the potential to enhance MH outcomes, it is also likely that SP will influence social mediators that can have a downstream impact on MH. In adults, observational studies have shown that SP is associated with increased social relationships [13], decreased loneliness [14], and increased behaviour activation [15] with small to moderate effect sizes. However, there is a definite need to build the evidence in pediatric MH populations.

The evidence for social prescribing in children and youth with MH difficulties is severely lacking. Although social prescribing can be implemented across the lifespan, it is especially important for children and youth because of their greater susceptibility to the effects of health inequalities [16]. There have been international calls to build the evidence base around social prescribing for children and youth, particularly those belonging to equity-deserving groups [17–19]. A scoping review conducted by Muhl and colleagues (2024) identified nine studies examining the effects of social prescribing for children and youth internationally [20]. Preliminary work in the UK has found that 79% of children and youth who were offered SP engaged in the activity, demonstrating high uptake [21]. However, there are currently several limitations to the evidence for social prescribing in children and youth: (1) there was only one randomized controlled trial (RCT) examining the effects of social prescribing in children and youth [10]; (2) most social prescribing studies have only included individuals from White backgrounds; and (3) limited work has been conducted with children and youth facing MH difficulties, despite this being a group who could strongly benefit from this approach [20]. To address these research gaps we will conduct an implementation-effectiveness study, with a focus on enhancing access and equity for diverse groups, to inform a larger, multi-site study of SP for MH difficulties of children and youth across Canada.

Aim of the study

The overarching goal of the Social Prescriptions for Advancing Resilience in Kids (SPARK) study is to establish the preliminary feasibility of implementing social prescribing for children and youth aged 11–17 who are on a waitlist for outpatient MH support, and to identify key factors that contribute to successful implementation of this approach. The study objectives are twofold; objective one will explore the feasibility, acceptability, and suitability of social prescribing from the perspective of staff, youth, and caregivers. This includes identifying the

barriers and facilitators to implementing social prescribing within an outpatient MH clinic and evaluating how the approach is taken up within a clinical setting. Objective two will examine the outcomes of social prescribing for youth experiencing MH difficulties. This will include an assessment of its impact on youths' symptoms of anxiety and depression, overall wellbeing, emotional and behavioural difficulties, social connectedness, and protective factors.

Methods and design

Aim and study objectives

The study will be conducted at the CHEO Outpatient Mental Health (OPMH) clinic, a tertiary care hospital multidisciplinary team offering assessment and treatment services to youth with serious, ongoing MH concerns. This trial is being conducted in accordance with the Standard Protocol items: Recommendation for Interventional Trials (SPIRIT) [22]. Participant flow through the study is outlined in Fig. 1.

The study protocol was developed in line with the SPIRIT 2013 guidelines, and the SPIRIT checklist is provided (Appendix A). To address our two research objectives, we will employ a type I hybrid implementation study including quantitative (questionnaires) and qualitative (interview) methods. Objective one aims to assess the feasibility and acceptability of the social prescribing intervention. To do this, the study will include a qualitative component involving interviews with three groups: (1) five children and youth recruited from the intervention group after completing objective two, (2) five caregivers of youth in the intervention group, and (3) five staff members who have experience with youth receiving social prescribing. We will conduct qualitative interviews with staff (n = 5), youth (n = 5), and caregivers (n = 5) to identify potential barriers and facilitators of implementing SP. A participation selection model will be used for qualitative interviews to ensure the perspective of diverse youth are captured [23]. Quantitative outcomes of feasibility and acceptability, such as recruitment rate, acceptability, satisfaction, retention, and time to completion will be measured.

For objective two, following consent and introduction to the study, youth will be randomized to either SP or an

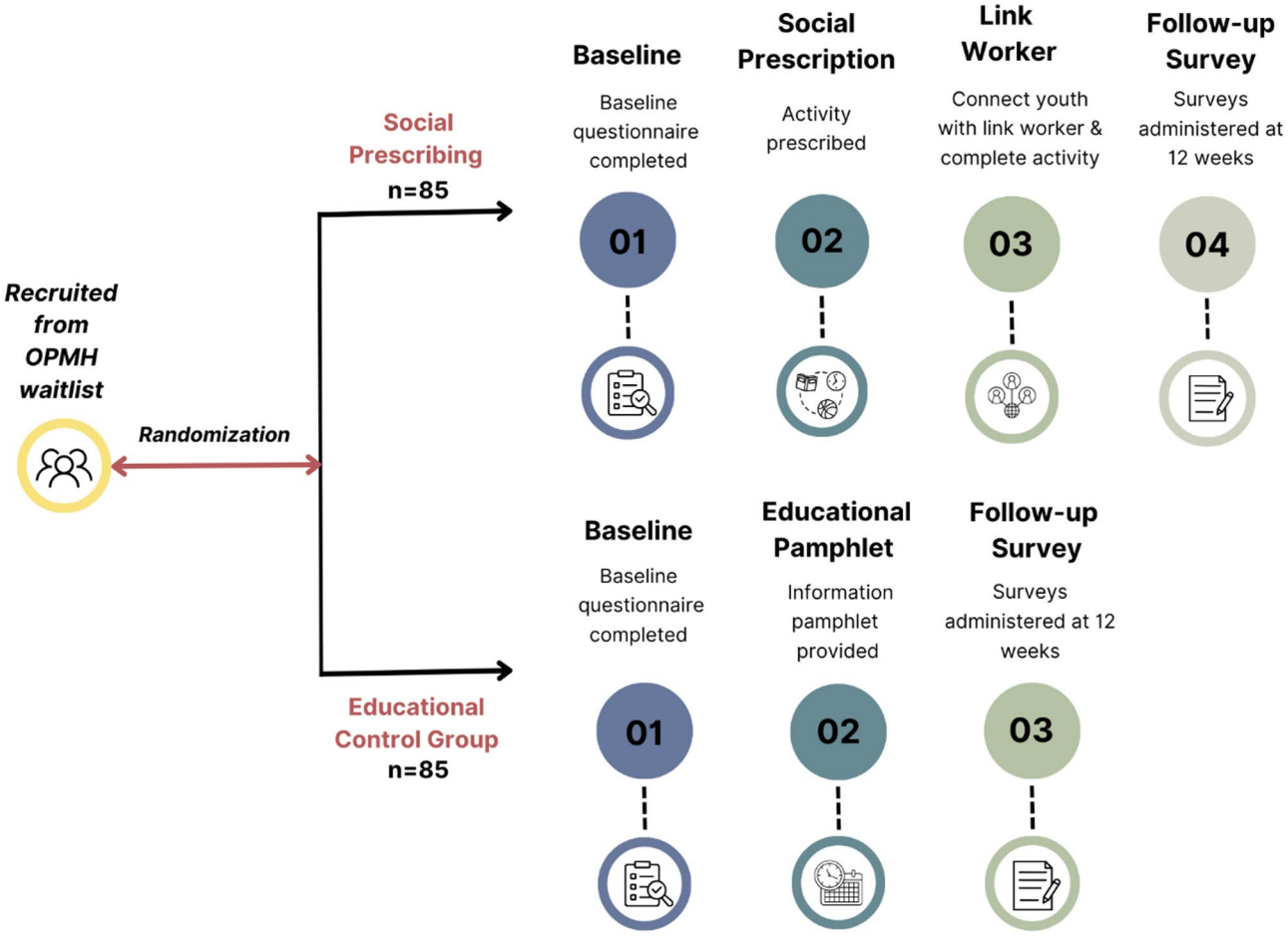

Fig. 1 SPARK study recruitment and data collection

		July 2025- September 2026		
	Enrolment	**Randomization**	**Post-randomization**	
TIMEPOINT**	***07/2025***	**1:1**	***4 weeks***	***12 weeks***
ENROLMENT:				
Eligibility screen	X			
Informed consent	X			
Baseline questionnaire	X			
Randomization		X		
INTERVENTIONS:				
Social Prescribing Intervention			◆ ⟷	⟷
Educational Control			◆	
ASSESSMENTS:				
RCADS, PSS, WEDMWS, SDQ, SCS, STS	X			X
AIM, IAM, FIM				X

Fig. 2 SPIRIT Figure: Study timeline and allocation

education control group. We will assess child outcomes (mental health symptoms, stress, emotional, and behavioural difficulties) using wellbeing measures reported by children and caregivers at baseline, and again at 12 weeks after randomization for the control group and after the start of social prescribing activities for the intervention group. In addition, all children and youth, caregivers, and staff involved in the SP intervention will complete implementation outcome questionnaires 12 weeks after their social prescription. The study timeline and participant allocation are illustrated in Fig. 2.

Study population

One hundred and seventy youth and their caregivers who are on the waitlist for services at CHEO Outpatient Mental Health (OPMH) in Ottawa, Ontario Canada (85 SP, 85 education control) will be recruited for the study. Youth will be eligible if they are (1) between 11 and 17 years of age; (2) on the waitlist for CHEO MHOP services, and (3) are not an immediate safety threat to themselves, as these patients are referred to a different clinical pathway. Additionally, children and youth and their caregivers will need to be able to read and speak English to be eligible for participation. Caregivers of participating youth will also be asked to participate, though their participation is not mandatory. Additionally, all SP activities will be covered by grant funding, ensuring no extra cost to participating families. Moreover, participation is voluntary and their choice whether to participate in the study will not impact the services or care received at CHEO. Participants can withdraw from the study at any time and request that their data be removed from the sample.

Recruitment

Youth and caregivers will be introduced to the study by a MH intake worker during the initial intake phone appointment. Intake workers will identify families who are eligible to participate. Intake workers will then use an approved script to introduce the study and ask if they would like to be contacted by a research team member to hear more details about the study. For those interested, MH intake workers will notify the research team. The research assistants will call potential participants to determine their interest in study participation, review the consent form, and obtain verbal consent. During the consent review, the research assistant will assess capacity of the children and youth to provide informed consent. Those who are deemed not to have the capacity to consent will be asked to provide assent, while their caregivers will be asked to provide consent on their behalf.

Study design

Participants recruited for the study will undergo a 1:1 randomization to determine if they are placed in the control group or the intervention group. This randomization will occur after baseline measures are completed, using the REDcap [24] online survey platform. Once the allocation is assigned, a research assistant will contact each participant to notify them of their assigned study group. The intervention group will undergo a social prescribing treatment protocol, while the educational control group will not (see Fig. 1). Consenting youth from both the intervention and control groups will be asked to complete a baseline questionnaire hosted on an online platform, REDcap, and will include demographic and well-being questions. Demographic information such as sex, sexual orientation, age, and race/ethnicity will be asked. Information on MH treatment received at CHEO post enrollment in the study (i.e., services accessed, duration in services, and number of treatment sessions) will be collected from their patient file. All identifying information will be removed and data will be secured in a password protected file on CHEO servers. The questionnaires will ask about youth's symptoms of anxiety and depression (Revised Children's Anxiety and Depression Scale; RCADS) [25], stress (Perceived Stress Scale; PSS) [26], wellbeing (Warwick-Edinburgh Mental Wellbeing Scale; WEMWBS) [27] emotional and behavioral difficulties (Strength and Difficulties Questionnaire; SDQ) [28], social connectedness (Social Connectedness Scale; SCS) [29] and protective factors (Student Resilience Survey; RSC) [30] at baseline and 12 weeks after the activity starts or after the wait period for those on the waitlist. Information with regards to subsequent services utilized by the youth after the social prescription will also be tracked from their patient file at CHEO. Specifically, we will extract what services and how many sessions the youth completed. Additionally, the post-questionnaire will comprise the same measures as the pre-questionnaire, with the addition of the Acceptability of Intervention Measure (AIM), Intervention Appropriateness Measure (IAM), and Feasibility of Intervention Measure (FIM) [31] and the removal of the demographic questions. Research assistants will conduct regular phone and email follow-ups with participants to promote retention.

Intervention

Participants assigned to the intervention group will take part in a collaborative 90-minute in-person appointment with a pediatric physician to identify the youth's social needs using the My Mind Star tool [32], which is a personalized assessment tool to identify individual needs in seven key areas (i.e., feelings and emotions, healthy lifestyle, home life, friends and relationships, school, time, self-esteem). This appointment will result in the co-creation of the social prescription. The social prescription will fall into one or more of six domains: physical activity, arts/culture, practical skills, leisure, career exploration, and time in nature. Next, a connection will be fostered with a link worker, an experienced mental health clinician with a strong knowledge of community resources. The link worker will support the participant with their assigned SP activity. The link worker will contact the youth on a weekly basis to see how the activity is progressing and to troubleshoot any challenges. The link worker will maintain ongoing communication with participants via phone and email. Social prescribing activities will vary depending on the assigned activity. The activities will last a maximum of 12 weeks. The control group will not receive a needs assessment, connection to

a link worker, or support in engaging in activities. After 12 weeks, youth and caregivers in both the control and intervention groups will be asked to complete the post-questionnaire. Additionally, those within the intervention group will participate in clinical check-ins at intake, 6 weeks, and 12 weeks.

Statistical analysis

Sample size calculation

For sample size, assuming ~ 25% participant attrition [33]. and using calculations based on two sided two-sample t-test with 80% power, we will need n = 170 individuals (n = 85 per group) to detect between-group differences of medium effect size (Cohen's d = 0.5) [34] in the primary outcome. At any given point, there are approximately 40 youth on the mental health waitlist, with new referrals being added continuously as others begin treatment. This sustained demand indicates a sufficiently large pool of potential participants to recruit from, supporting our targeted sample size of 170 children and youth.

Statistical analysis

For objective one, the audio recorded interviews will be transcribed, coded, and analyzed using thematic analysis. The transcripts will subsequently be coded by two research assistants and themes will be identified as a team. All study data will be securely stored on CHEO servers, and access will be limited to the members of the research team. Data will be routinely checked by the research team, along with collaborating statisticians. We will conduct the thematic analysis deductively, and transcription and data analysis will be conducted concurrently using NVivo software [35]. We will use "memoing" (i.e., analytic memos) and regular meetings to increase the dependability of findings. The sample size for the qualitative study is based on what is feasible for the purposes of this pilot. Previous research has shown that data saturation typically occurs after approximately 12 interviews [36], thus we anticipate 15 interviews will be sufficient for the purposes of this pilot. The PI has expertise in both quantitative and qualitative research. If participants come off the waitlist to receive MH services, they will be retained in the study. All changes in services received will be documented.

For objective two, descriptive statistics will be used to summarize demographic data.

Linear models will be used to compare the change in outcomes (mental health symptoms, stress, emotional and behavioural difficulties) from baseline to 12-weeks post-intervention between the two groups, while controlling for clinical values and demographic variables. Baseline and post-intervention outcomes will be collected for all participants, regardless of their level of engagement.

Collaborative framework for implementation

The successful implementation of social prescribing depends on the coordination of multiple individuals. Strong collaboration among the research team, link worker, youth and their families are essential. To ensure a supportive system is in place, weekly meetings will be held between the research assistant, research coordinator, clinician, and link worker. The principal investigators will also attend these meetings regularly to address any questions or concerns that arise. Ongoing communication is essential to support the delivery and continuity of this personalized approach to care.

In addition, the team is committed to ensuring that diverse perspectives are meaningfully integrated throughout the project. A youth with lived experience is included as a co-investigator, contributing directly to decision-making and project development. Furthermore, the research team collaborated with the Patient and Family Advisory Council at CHEO to incorporate the voices of patients and caregivers early in the design phase. These collaborations remain central during the implementation phase of the project.

Discussion

Practical and operational considerations

SP offers an innovative approach to supporting wellbeing, particularly for young people who are waiting to access mental health care. It involves connecting children and youth with community-based services that promote relationship-building, social connection, and opportunities to explore personal interests. Implementing a clinical trial on social prescribing requires careful attention to practical and operational factors. It is important to anticipate potential challenges that may arise during the study to ensure smooth and responsible implementation.

Recruitment and data collection challenges

Given the nature of the study, all participants will be youth placed on the CHEO OPMH waitlist, which has an average wait time of 3 to 4 months, but this might fluctuate during the study. The study's participation period spans over 12 weeks. Recruitment will be conducted gradually, and youth placed on the waitlist will be promptly contacted by research staff to determine eligibility and obtain consent, enabling timely enrollment. Although unlikely, some participants may begin receiving mental health care at CHEO during their participation in the study. Should this occur, the research team will document these instances to ensure the final analysis accounts for any additional services accessed. Moreover, while working with youth that have been identified as needing mental health support, there is a possibility of symptom exacerbation during the study. This necessitates safety monitoring and ongoing communication within

the team. If the link worker observes any decline in participant mental health, the principal investigators will be consulted to determine appropriate follow-up actions. All adverse events will be reported and signed off by the principal investigators, and an adverse event log will be maintained. Ensuring participant safety remains a high priority throughout the study, and robust monitoring protocols will be key for the project's successful and safe execution.

Implementation barriers

The implementation of social prescribing heavily relies on the availability and participation of community-based organizations that offer the activities that are prescribed. The services available to participating youth will be dependent on the scope of the programs offered by partnering community organizations. These organizations may face their own barriers, such as waitlists, funding limits, capacity constraints, and eligibility requirements, which could influence the timing and accessibility of services. To mitigate these barriers, a key and ongoing role of the project's link worker will be to engage directly with community organizations and maintain a detailed record of factors that might impact participant involvement. In addition, prior to the start of recruitment, a community-mapping team will develop and maintain an ongoing database of potential community organizations.

Project monitoring and record keeping

Social prescribing is a care approach that is inherently individualized and designed to meet unique needs and interests of each participant. While this personalized care model enables tailored support, it also introduces a degree of variability in the type and frequency of activities accessed. For example, a participant's 12-week involvement might consist of a single visit to a museum or arts performance, or it could involve several ongoing sessions in a sport or physical activity program. The aim is to implement a rolling social prescribing model, allowing participants to engage in multiple social prescribing activities of interest over the 12-week period. As a result, there is expected variation in each participant's level of engagement, which creates the need for detailed and accurate record keeping. To manage this variability, the research assistant will work closely with the link worker to track any additional variables related to the type, frequency, and duration of activities accessed.

Additionally, it is important to document any losses to follow-up over the 12-weeks. The research team recognizes that various barriers or circumstances, such as family relocation, school commitment, or caregiving responsibilities, may prevent some participants from completing the study. These factors will be closely monitored and documented to ensure transparency in reporting and to conceptualize study outcomes. Efforts will be made to follow-up with individuals who discontinue their participation in the social prescribing activity, and they will be asked to complete post-intervention measures.

Conclusion

One in five Canadian young people are facing MH difficulties with limited access to support and long waitlists for services. The time is now to develop a creative and innovative solution to enhance child and youth wellbeing. SPARK will provide critical evidence about the use of SP for children facing MH difficulties in Canada. In the short term, we will generate data on the feasibility and effectiveness of a program of SP provided to young people waitlist for MH services, data which will be used to inform a large multi-site implementation trial. In the long-term, this project will advance knowledge on pediatric social prescribing and enhance our understanding of how to support children and youth living with MH challenges.

Abbreviations

SP	Social prescribing
CHEO	Children's Hospital of Eastern Ontario
MH	Mental health
OPMH	Outpatient mental health

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s40359-025-03465-7.

Supplementary Material 1

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Author contributions

SK and NR wrote the first draft of the protocol. SK, NR, OM, PC and SB all reviewed the protocol and provided feedback. All authors read, provided feedback and approved the final manuscript.

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Data availability

Data associated with the SPARK study is from CHEO patients and cannot be shared publicly. However, any requests about the data or data protocol should be sent to the corresponding author. Study findings will be disseminated and published.

Declarations

Ethics approval and consent to participate

Ethics approval was obtained from the Children's Hospital of Eastern Ontario Research Institute Ethics Board (REB #25/37X). Informed consent will be obtained from all participants. When participants were unable to provide consent, assent was obtained, and consent was sought from a substitute decision maker. Any modifications to the protocol will be reviewed and approved by the CHEO ethics board.

Consent for publication

N/A.

Competing interests

The authors declare no competing interests.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the authors used AI-assisted tools to support writing structure (i.e., spelling, grammar). After using these tools, the authors carefully reviewed and revised the content and take full responsibility for the content of the publication.

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References

1. The Conference Board of Canada. Nurturing minds for secure futures. In.; 2023.
2. Cost KT, Crosbie J, Anagnostou E, Birken CS, Charach A, Monga S, Kelley E, Nicolson R, Maguire JL, Burton CL, et al. Mostly worse, occasionally better: impact of COVID-19 pandemic on the mental health of Canadian children and adolescents. Eur Child Adolesc Psychiatry. 2022;31(4):671–84.
3. Georgiades K, Duncan L, Wang L, Comeau J, Boyle MH, Team OCHS. Six-Month prevalence of mental disorders and service contacts among children and youth in ontario: evidence from the 2014 Ontario child health study. Can J Psychiatry. 2019;64(4):246–55.
4. Fante-Coleman T, Jackson-Best F. Barriers and facilitators to accessing mental healthcare in Canada for black youth: A scoping review. Adolesc Res Rev. 2020;5(2):115–36.
5. van Doorslaer E, Masseria C, Koolman X, Group OHER. Inequalities in access to medical care by income in developed countries. CMAJ. 2006;174(2):177–83.
6. Mental health in. children adn young people top 10 [https://www.jla.nihr.ac.uk/priority-setting-partnerships/Mental-health-in-children-and-young-people/top-10priorities.htm].
7. Muhl C, Mulligan K, Bayoumi I, Ashcroft R, Godfrey C. Establishing internationally accepted conceptual and operational definitions of social prescribing through expert consensus: a Delphi study. BMJ Open. 2023;13(7):e070184.
8. Zisman-Ilani Y, Hayes D, Fancourt D. Promoting social prescribing in Psychiatry—Using shared Decision-Making and peer support. JAMA Psychiatry. 2023;80(8):759.
9. Husk K, Elston J, Gradinger F, Callaghan L, Asthana S. Social prescribing: where is the evidence? Br J Gen Pract. 2019;69(678):6–7.
10. Rucker A, Watson AR, Badolato G, Jarvis L, Patel SJ, Goyal MK. Social navigation for adolescent emergency department patients: A randomized clinical trial. J Adolesc Health. 2024;74(2):292–300.
11. Magnan S. Social determinants of health 101 for health care: Five plus five. *National academy of medicine* 2017.
12. Kirkbride JB, Anglin DM, Colman I, Dykxhoorn J, Jones PB, Patalay P, Pitman A, Soneson E, Steare T, Wright T, et al. The social determinants of mental health and disorder: evidence, prevention and recommendations. World Psychiatry. 2024;23(1):58–90.
13. Wakefield JRH, Kellezi B, Stevenson C, McNamara N, Bowe M, Wilson I, Halder MM, Mair E. Social prescribing as 'Social cure': A longitudinal study of the health benefits of social connectedness within a social prescribing pathway. J Health Psychol. 2022;27(2):386–96.
14. Paquet C, Whitehead J, Shah R, Adams AM, Dooley D, Spreng RN, Aunio A-L, Dubé L. Social prescription interventions addressing social isolation and loneliness in older adults: Meta-Review integrating On-the-Ground resources. J Med Internet Res. 2023;25:e40213.
15. Brettell M, Fenton C, Foster E. Linking leeds: A social prescribing service for children and young people. Int J Environ Res Public Health. 2022;19(3):1426.
16. Spencer N, Raman S, O'Hare B, Tamburlini G. Addressing inequities in child health and development: towards social justice. BMJ Paediatrics Open. 2019;3(1):e000503.
17. The Lancet. Social prescribing: bringing community back to health? Lancet. 2025;406(10499):103–103.
18. Bertotti M, Fenton C, Foster E. Linking leeds: A social prescribing service for children and young people. Int J Environ Res Public Health. 2022;19(3):1426.
19. Hayes D, Jarvis-Beesley P, Mitchell D, Polley M, Husk K. The impact of social prescribing on children and young people's mental health and wellbeing. London: National Academy for Social Prescribing; 2023.
20. Muhl C, Cornish E, Zhou XA, Mulligan K, Bayoumi I, Ashcroft R, Ross-White A, Godfrey C. Social prescribing for children and youth: A scoping review. Health Soc Care Commun. 2025;2025(1):5265529.
21. Fancourt D, Burton A, Bu F, Deighton J, Turner R, Wright J, Bradbury A, Tibber M, Talwar S, Hayes D. Wellbeing while waiting evaluating social prescribing in CAMHS: study protocol for a hybrid type II implementation-effectiveness study. BMC Psychiatry. 2023;23(1):328.
22. Chan AW, Tetzlaff JM, Altman DG, Laupacis A, Gotzsche PC, Krleza-Jeric K, Hrobjartsson A, Mann H, Dickersin K, Berlin JA, et al. SPIRIT 2013 statement: defining standard protocol items for clinical trials. Ann Intern Med. 2013;158(3):200–7.
23. Vaughn LM, Jacquez F. Participatory research Methods – Choice points in the research process. J Participatory Res Methods 2020;1(1).
24. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)—A metadata-driven methodology and workflow process for providing translational research informatics support. J Biomed Inform. 2009;42(2):377–81.
25. Revised Children's Anxiety and Depression Scale (and Subscales). (RCADS) [https://www.corc.uk.net/outcome-measures-guidance/directory-of-outcome-measures/revised-childrens-anxiety-and-depression-scale-rcads/]
26. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. J Health Soc Behav. 1983;24(4):385–96.
27. Tennant R, Hiller L, Fishwick R, Platt S, Joseph S, Weich S, Parkinson J, Secker J, Stewart-Brown S. The Warwick-Edinburgh mental Well-being scale (WEMWBS): development and UK validation. Health Qual Life Outcomes. 2007;5(1):63.
28. Goodman R. The strengths and difficulties questionnaire: A research note. J Child Psychol Psychiatry. 1997;38(5):581–6.
29. Lee RM, Robbins SB. Measuring belongingness: the social connectedness and the social assurance scales. J Couns Psychol. 1995;42(2):232–41.
30. Lereya ST, Humphrey N, Patalay P, Wolpert M, Bohnke JR, Macdougall A, Deighton J. The student resilience survey: psychometric validation and associations with mental health. Child Adolesc Psychiatry Ment Health. 2016;10:44.
31. Weiner BJ, Lewis CC, Stanick C, Powell BJ, Dorsey CN, Clary AS, Boynton MH, Halko H. Psychometric assessment of three newly developed implementation outcome measures. Implement Sci. 2017;12(1):108.
32. Outcome Star. My Mind Star: The Outcomes Star for young people's mental health and well-being. In.; 2019.
33. Lowell DI, Carter AS, Godoy L, Paulicin B, Briggs-Gowan MJ. A randomized controlled trial of child FIRST: A comprehensive Home-Based intervention translating research into early childhood practice. Child Dev. 2011;82(1):193–208.
34. Bertotti M, Frostick C, Sharpe D, Temirov O. A two-year evaluation of the young people social prescribing (YPSP) pilot. In. Institute for connected communities. University of East London; 2020.

35. Allsop DB, Chelladurai JM, Kimball ER, Marks LD, Hendricks JJ. Qualitative methods with Nvivo software: A practical guide for analyzing qualitative data. Psych. 2022;4(2):142–59.
36. Vasileiou K, Barnett J, Thorpe S, Young T. Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period. BMC Med Res Methodol. 2018;18(1):148.

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