



Brief Report

Adolescents Identify Modifiable Community-Level Barriers to Accessing Mental Health and Addiction Services in a Rural Canadian Town: A Survey Study

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Abstract: Adolescents are particularly vulnerable to inadequate provision of mental health and addictions care, as services have been traditionally conceptualized to serve the needs of children or adults. Additionally, rural communities have been largely excluded from research investigating mental healthcare access and exhibit unique barriers that warrant targeted interventions. Finally, perspectives from the target population will be most important when understanding how to optimize adolescent mental health and addictions care. Therefore, the purpose of this study was to identify what adolescents in a rural town perceive as barriers to accessing mental health services. We conducted a cross-sectional survey study with high school students to generate ranked lists of the top perceived individual-level, community-level, and overall barriers. A total of 243 high school students responded to the survey. Perceived barriers were predominantly at the community level. Overall, the top barriers reported were a lack of awareness and education regarding mental health, resources, and the nature of treatment. Students who had previously accessed mental health services identified primary barriers related to mental health professionals, whereas students who had not accessed care reported fear and uncertainty as primary barriers. Modifiable community-level factors related to (1) mental health literacy and (2) mental healthcare professionals were identified by adolescents as the main perceived barriers to accessing mental health and addiction services in a rural town. The findings of this preliminary study should inform intervention strategies and further rigorous research for this traditionally underserved target population.

Keywords: adolescent; mental health; healthcare services; rural medicine; barriers; access



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1. Introduction

One in ten Canadians over the age of 15 report having experienced at least one mental disorder in the previous 12 months, and about one in five report needing mental health services [1]. Mental health disorders lead to significant health and economic burdens globally and within North America [2]. The significance and impact of mental health disorders on individuals, society, and the healthcare system have been largely underestimated and warrant global action to fund and prioritize relevant treatment and services [2].

Many mental health issues, including mood and psychotic syndromes, start during adolescence, with long-term effects persisting into adulthood [3]. It has been hypothesized that the burden of mental illnesses can be minimized by facilitating timely and effective treatment after symptoms first appear in adolescent-onset conditions [3]. Adolescence is characterized by significant physical and social changes [3], leading to distinct healthcare needs that require individualized interventions. These needs are often not well met within

the current mental health services framework, which is conventionally designed for either children or adults [4]. During their transition to adulthood, adolescents develop increasing autonomy and capacity for self-initiated health-seeking behavior. As such, it is critical to include the perspective of adolescents in research regarding their care, rather than only the traditionally studied perspectives of healthcare providers, teachers, and caregivers.

Over the past decade, pediatric emergency room visits have close to doubled in the United States, with the largest rate increase observed in adolescents compared to children or young adults [5]. A concerning number of adolescents present in crisis to the emergency department with signs of severe mental illnesses, having not previously received any mental health services, as evidenced by a five-fold increase in pediatric suicide-related visits to the emergency department [5,6]. This pattern is especially prominent in rural areas [6]. Rural communities face unique challenges in healthcare delivery, often related to a lack of healthcare professionals and exacerbated by a lack of consistent personnel [7]. Rural areas in Canada have been dubbed "communities in crisis" due to a lack of sufficient resources to operate key emergency and ambulatory health services [7]. Within our province of Nova Scotia, youth in rural communities and those with lower socioeconomic status were identified as potentially underserved groups, who may interact with the healthcare system in less cost-effective ways [8].

Therefore, the purpose of this study was to identify the primary barriers to accessing mental health and addictions services, as perceived by adolescents in a rural community. This study was designed as a preliminary descriptive study to investigate an underrepresented group: adolescents in rural communities. This exploratory study is intended to inform potential intervention strategies or policies that can be studied in larger trials.

2. Materials and Methods

We conducted a cross-sectional survey study to describe barriers to accessing mental health and addiction services in high school students in the rural town of Antigonish, Nova Scotia, Canada. We adapted a questionnaire originally created by Church and colleagues based on the Canadian Institutes of Health Research's conceptual model of systems-, community-, and individual barriers to accessing child and youth mental healthcare [9]. In order to tailor the questionnaire to adolescent respondents and increase engagement/completion, we removed questions related to system-level barriers and the identification of mental health conditions. We added questions related to a few additional barriers and facilitators identified in a previous study on family perspectives on pathways to mental healthcare for children and youth in rural communities that we deemed relevant [10]. The final questionnaire was divided into the following sections: perception of individual-level barriers, perception of community-level barriers, and respondent characteristics (demographics, attempts to access mental health services, and awareness of resources). For each proposed barrier, students responded as to whether they strongly disagreed, somewhat disagreed, were neutral, somewhat agreed, or strongly agreed that this was a barrier to accessing mental health and addiction services. A registered nurse and crisis mental health worker and the quality lead in mental health and addictions for the area reviewed the questionnaire to ensure face validity. A summary of the potential barriers asked about are displayed in Table 1, and the full questionnaire is available as Appendix A.

All high school students were eligible to participate in the study. The questionnaire was made available online on a secure platform (Redcap), allowing adolescent participants to respond anonymously. Informed consent was obtained from all participants, implied by questionnaire completion. We distributed the questionnaire from March to June 2019. Ethical approval was obtained from the Nova Scotia Health Authority (NSHA) Ethical Review Board (REB # 1023909). We informed and obtained approval from the relevant stakeholders, including the school board, school staff, and school resource providers, in addition to informing students and parents of the study and its purpose.

Table 1. Summary of individual- and community-level barriers to accessing mental health and addiction services, from the questionnaire distributed to high school students in a rural community.

Individual-Level Barriers		Con	nmunity-Level Barriers
1.	Lack of transportation	1.	Fear of gossip
2.	Live too far away	2.	Fear of social exclusion
3.	Parking cost	3.	Lack of anonymity
4.	Difficulty with scheduling	4.	Fear of being judged by friends
5.	Lack of time/other activities	5.	Lack of confidential location/space
6.	Too tired after school	6.	Fear of shaming my family
7.	School schedule too hectic	7.	Same health provider performing
8.	Takes time away from spending time		multiple roles
	with friends	8.	Lack of collaboration/communication
9.	Added stress		among service providers
10.	Health problems or illness	9.	Mental health providers keep changing
11.	Crisis at home	10.	Lack of qualified mental health
12.	Family health problems or illness		professionals
13.	Family members would prevent or	11.	Lack of youth-friendly services
	disagree with treatment	12.	Inability of service providers to relate to
14.	Unsure of what treatment would entail		youth
15.	Previous negative experience with mental health services	13.	Lack of proper education regarding mental health issues
16.	Embarrassment	14.	Lack of awareness regarding available
17.	Fear of being prescribed medication		resources
18.	Belief that peoples who access mental		
	health services are "crazy"		
19.	Belief that accessing mental health		
	services is a sign of weakness		
20.	Lack of trust in mental health		
	professionals.		

Note: For each proposed barrier, students responded as to whether they strongly disagreed, somewhat disagreed, were neutral, somewhat agreed, or strongly agreed that this was a barrier to accessing mental health and addiction services.

A points system was introduced for data analysis, whereby for each barrier, Likert scale responses were allotted points from "strongly agree" (1 point) to "strongly agree" (5 points). The points allotted to each barrier were summed across all respondents and weighted by the number of respondents that answered the question to yield a mean score from 1 to 5. We then generated ranked lists of the top perceived overall-, individual-, and community-level barriers reported by respondents. We completed this analysis for the entire sample and completed a sensitivity analysis, stratifying the sample by students who had and had not previously accessed mental health services. We analyzed the data as collected based on a low percentage of missing data.

A required sample size of 136 respondents was calculated based on a conservative estimate of the prevalence of mental health issues in our population as 10%, a 95% confidence level, and accounting for 15% missing data with a finite population correction for the 700 students who were sent the survey [11].

3. Results

3.1. Participants

A total of 243 students responded to the survey (response rate: 34%, 234/700), meeting the required sample size. Most respondents were 15 to 16 years old and lived with their parents. About one-third reported that they had tried to access mental health services in the past, and only half of this group were satisfied with the services provided. Most students (>70%) were aware of at least one mental health resource that they were asked about. Descriptive characteristics of the respondents are displayed in Table 2.

Table 2. Descriptive characteristics of student respondents.

Characteristic	N (%)
Age	
15–16	159 (65.2)
17–18	66 (27)
19–20	2 (2.5)
Missing	13 (5.3)
Gender	
Male	93 (38.1)
Female	129 (52.9)
Other	7 (2.9)
Prefer Not to Say	4 (1.6)
Missing	11 (4.5)
Living Situation	
With Mom and/or Dad	225 (92.2)
With Other Family Member	5 (2.0)
Foster Home	1 (0.4)
With Friends	4 (1.6)
No Fixed Address	1 (0.4)
Missing	8 (3.3)
Tried to Access Mental Health Services in the Past	
Yes	79 (32.4)
Satisfied	38 (49.4)
Not Satisfied	32 (41.6)
Prefer Not to Say	7 (9.1)
No	154 (63.1)
Prefer Not to Say	5 (2.0)
Missing	6 (2.5)
Awareness of Existing Community Services	
School Plus	173 (73.0)
St. Martha's Mental Health and Addiction Services	173 (70.9)
Family Services of Eastern Nova Scotia	77 (31.6)
Awareness of Existing Online Resources	
KidsHelpPhone.ca	203 (83.2)
Teenmentalhealth.org	104 (42.6)

3.2. Perceived Barriers to Accessing Mental Health Services

The top five perceived overall, community-level, and individual-level barriers to accessing mental health and addiction services across all respondents are shown in Figure 1. When both individual- and community-level barriers were pooled together, community-related factors were more prominent, being listed as four of the top five overall barriers (Figure 1).

The top individual-level barriers identified were similar when respondents were stratified by having previously accessed mental health services, with both groups listing being unsure of what treatment would entail at the top of their list. Importantly, negative past experience(s) with mental health services was listed as the fifth individual-level barrier from those who had accessed services. There were interesting differences amongst the top community-level barriers between those who had and had not accessed services. Both groups shared a lack of education regarding mental health and a lack of awareness of available resources as top five barriers. Students who had previously accessed services reported issues with mental health professionals and services themselves as important barriers, including a lack of qualified mental health professionals, that mental health providers keep changing, and a lack of collaboration/communication among service providers. In contrast,

students who had not previously tried to access services perceived fear/social stigmas as important barriers, including a fear of gossip, exclusion, and being judged by friends. The results from the analysis, stratified by previous access to services, are summarized in Table 3.

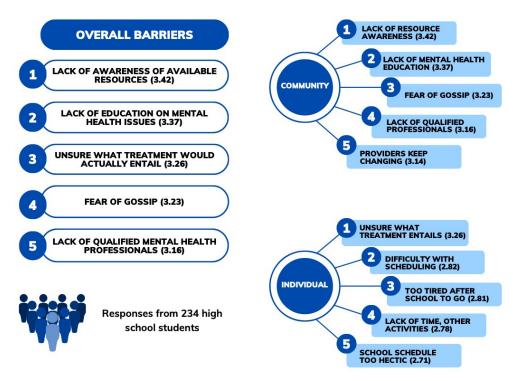


Figure 1. Ranked lists of top perceived overall, community-level, and individual-level barriers to mental health services as reported by 234 high school students in a rural town. Mean scores from Likert scales are indicated in brackets next to the barrier label (range 1 to 5).

Table 3. Top five individual-level barriers to mental health and addiction services, stratified by previous access to services.

	Have Accessed Services in the Past	Have Not Accessed Services in the Past/ Prefer Not to Say						
	INDIVIDUAL-LEVEL BARRIERS							
1	Unsure of what treatment would entail (3.10)	Unsure of what treatment would entail (3.33)						
2	Too tired after school (3.10)	Will not have time/other activities (2.83)						
3	Scheduling appointment times (2.91)	Scheduling appointment times (2.78)						
4	School schedule too hectic (2.89)	Too tired after school (2.89)						
5	Negative past experience(s) with mental health services (2.81)	School schedule too hectic (2.63)						
	COMMUNITY-LEVEL BARRIERS							
1	Lack of education regarding mental health (3.65)	Lack of awareness of available resources (3.42)						
2	Lack of awareness of available resources (3.40)	Fear of gossip (3.31)						
3	Lack of qualified mental health professionals (3.23)	Lack of education regarding mental health (3.23)						
4	Mental health providers keep changing (3.21)	Fear of exclusion (3.13)						
5	Lack of collaboration/communication among service providers (3.14)	Fear of being judged by friends (3.13)						

Bolded barriers represent those that differ between groups. Mean scores from Likert scales are indicated in brackets next to barrier description (range 1 to 5).

4. Discussion

The main finding of this study is that community-level barriers related to mental health literacy (education, awareness, and knowledge) and mental healthcare providers were identified as the primary barriers to adolescents accessing mental health services in a small rural town. Importantly, community-level barriers are more easily modified by

healthcare providers, policy makers, and stakeholders than individual-level barriers and this study has identified feasible targets of interventions, strategies, and policies that are specific to a rural community. We will now discuss the main barriers reported in our study within the context of the wider literature and potential solutions.

A lack of education, awareness, and mental health literacy are the most cited barriers to accessing mental health services [9,10,12]. While our study did not investigate the mechanism of these barriers, poor mental health literacy has been associated with an inability to recognize signs and symptoms of mental health illnesses [9,13]. This lack of knowledge can manifest in individuals as an uncertainty about whether services are needed and how they might help, especially in the uncertain era of adolescence. Ultimately, these barriers likely delay and prevent help-seeking behaviours. Reviews of mental health literacy and education interventions report positive outcomes, including improved knowledge and decreased stigmatizing or negative attitudes around mental health issues [14,15]. Potential education-based interventions could include community-based interventions (targeting the whole community or a specific youth audience), school-based interventions (teaching help-seeking, mental health literacy, and resilience), and training for individuals to better intervene in mental health crises [14,15]. Recommended strategies for developing and implementing successful education interventions include doing preliminary research with the target audience, using a proven theoretical base, tailoring messaging to different groups, using various media, and evaluating the implemented programs [14,15]. The current study represents step one of this process for our community.

A lack of qualified mental health professionals was one of the top five overall barriers reported. Further, respondents who had accessed mental health services expressed negative perceptions of the services received, citing a frequent turnover of mental health service providers and a lack of collaboration/communication amongst providers. A recent systematic review discussed the lack of national institutional cohesion and young-adult-specific policies in Canada [16]. Suggestions to improve the availability and quality of mental health professionals on a policy level are to allocate funding to scale up proven programs and ensure that these services are included in health insurance coverage [16]. Recently, virtual mental health initiatives have become popular as accessible and cost-effective proven models of care [16]. Youth appear willing to consider virtual mental health services, although fewer are willing in a group setting [17]. The advantages of virtual care include improved access to trained professionals and an overcoming of geographical barriers. Adolescents may feel less vulnerable or stigmatized and more comfortable accessing services from their homes and may enjoy the interactive features that technology can provide. For example, Canadian adolescents aged 14–25 who participated in a study investigating the use of an app for mental health services reported liking the increased communication with their provider (via messaging), appointment scheduling, integration of a safety plan, and reminders related to their wellness plan and medications [18]. It is important to note that some youth, especially those in rural areas or from low socioeconomic backgrounds, will face technological barriers that may prevent them from accessing this type of care.

This study is limited by a small sample size and responses from adolescents in a single school, which may limit the generalizability. However, this study aims to serve preliminary research in a specific target audience, to inform interventions that can be investigated in larger studies and may address the mental health literacy and workforce barriers that were clearly identified by adolescents in a rural Canadian town.

5. Conclusions

Modifiable community-level factors related to (1) mental health literacy and (2) mental healthcare professionals were identified by adolescents as the main perceived barriers to accessing mental health and addiction services in a rural town. The findings of this preliminary study should inform intervention strategies and further rigorous research for this traditionally underserved target population.

Author Contributions: O.O.-A. designed the study with contributions from H.B. and R.R.F.C.; O.O.-A., R.R.F.C. and H.B. collected the data; H.M. analyzed the data; and H.M. and O.O.-A. wrote the manuscript. All authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement: Ethical approval was obtained from the Nova Scotia Health Authority (NSHA) Ethical Review Board.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data are available upon request.

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Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A. Questionnaire Investigating Barriers to Accessing Mental Health and Addictions Services

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Adolescents identifying their barriers to access mental health and addiction services

Barriers to Accessing Mental Health Services for John Hugh Gillis High School Students

About This Questionnaire:

A significant number of Canadian youth reports having mental illnesses, but only one in five actually receive help (Health Canada, 2007). We need your help to learn why. We aim to find the barriers* that high school students face when trying to access mental health services. The information collected hopefully will help to plan mental health services for high school students in Antigonish.* Barrier: obstacle/something that would prevent you from accessing

Your participation is completely voluntary and anonymous. We won't collect any personal information able to identify you. This questionnaire addresses youth between 15- 20 years of age. The questions are not about your mental health, but rather about the mental health services available in the community and the potential barriers you might face if you need them. It will take approximately 20 minutes to complete the questionnaire. There are no right or wrong answers. You do not have to answer any questions you do not want to. If after you start completing the questionnaire you decide you would prefer not to finish it, that's fine, we understand. We appreciate your help regardless. If you choose to complete and submit the survey it is our understanding that you agree and consent to participate in our study and you understand that your participation is voluntary and confidential.

At the end of the survey, you will be given the opportunity to submit your email address for a draw to win 1 of 8 prizes of \$50.

If for whatever reason answering the questions brings to your mind unhappy feelings or thoughts, and you feel you want to discuss them with somebody, we have included a list of resources you can use.

List of Resources available:
KidsHelpPhone.ca 1-800-668-6868 Anytime Online or Telephone
Mental Health Crisis St. Martha's - Monday to Friday 8:30am-4:30pm - Adult (902) 867-4500 Ext. 4345 - Child Youth & Family (902) 867-4500 Ext. 4760
Teen Mental Health Organization teenmentalhealth.org

Your school guidance counsellors are also a valuable resource

If you have questions about your rights as a participant, or you have concerns or suggestions and you want to talk to the principal investigator, Dr. Oliva Ortiz-Alvarez or our research team, you may contact us at 902-867-1714 between 8:30AM and 4:30PM, or anytime at healthymindsproject@outlook.com

Imagine that you are seeking psychological help, counselling, or advice. For each item, please check a box to indicate how much you agree with the statement.

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PART 1. Perception of individual level barriers Thinking about individual level barriers, how much do you agree with each of the following statements?

	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
I do not have transportation (car, bicycle, taxi) to travel to treatment.	0	0	0	0	0
I live too far away from treatment. Having to pay for parking at the treatment facility will stop me from getting treatment.	0	0	0	0	0
Scheduling appointment times for treatment would be difficult.	0	0	0	0	0
I will not have time. I have other activities to do that would prevent me from getting treatment.	0	0	0	0	0
I am too tired after school to go to sessions.	0	0	0	0	0
My school schedule is too hectic.	\circ	\circ	\circ	\circ	\circ
Treatment would take time away from spending time with my friends.	0	0	0	0	0
I experience too much stress in my life and treatment will add more stress.	0	0	0	0	0
My own health problems or other illness would stop me from getting treatment.	0	0	0	0	0
Crisis at home will get in the Way in the way in our home will stop me from getting treatment.	0	0	0	0	0
Members of my family would stop me from getting treatment or they would disagree with me about whether I should come to treatment at all.	0	0	0	0	0
I am unsure of what treatment would actually entail.	0	0	0	0	0

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Due to negative experience(s) with mental health services in the past, I am now less likely to access mental health services.	0	0	0	0	0
I would be too embarrassed to access mental health services.	0	0	0	0	0
I would not access mental health services for fear that I would be put on medication.	0	0	0	0	0
I believe people who access mental health services are "crazy".	0	0	0	0	0
I believe accessing mental health services is a sign of weakness.	0	0	0	0	0
I do not trust mental health professionals.	0	0	0	0	0
Explain why distance would prevent to treatment:	you from getti	ng			
Explain why your other activities wo time for you to access treatment:	ould leave no				

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	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
Treatment will not focus on my life and problems.	0	0	0	0	0
Treatment might "bring out" new or different problems in my life.	0	0	0	0	0
Treatment will not work for me.	\circ	\circ	\circ	\circ	\circ
I prefer to rely on my friends and/or family when I have a problem.	0	0	0	0	0
Treatment is not necessary. I could handle any mental health issue without the need of mental health services.	0	0	0	0	0
I will probably lose interest in continuing treatment because it will not address my problems.	0	0	0	0	0
Treatment will become less important as it goes on.	0	0	0	0	0
I would like to know what to expect to be able to continue treatment.	0	0	0	0	0
Why do you think treatment will not	work for you?				
Comments:					

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PART 3. Perception of Community Level Barriers Thinking about your community (where you live), how much do you agree with each of the following statements?

	1. Strongly Disagree	2. Somewhat Disagree	3. Neutral	4. Somewhat Agree	5. Strongly Agree
Fear of gossip is a significant barrier to accessing mental health services.	0	0	0	0	0
Fear of social exclusion is a significant barrier to accessing mental health services.	0	0	0	0	0
Lack of anonymity is a significant barrier to accessing mental health services.	0	0	0	0	0
Fear of being judged by friends is a significant barrier to	0	0	0	\circ	0
services. Lack of confidential location/space is a barrier to accessing mental health services.	0	0	0	0	0
Fear of shaming my family is a significant barrier to accessing mental health services.	0	0	0	0	0
Same health provider performing multiple roles is a significant barrier to accessing services. (for example: family doctor also acting as mental health counselor)	0	0	0	0	0
Lack of collaboration/communication among service providers is a barrier to accessing services (For example: having to repeat your story session after session, to provider after provider)	0	0	0	0	0
Mental health providers keep changing.	0	0	0	0	0
Lack of qualified mental health professionals is a significant barrier to accessing mental health services.	0	0	0	0	0



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Lack of youth-friendly services (For example: texting) is a significant barrier to accessing mental health services.	0	0	0	0	0
There is an inability of service providers to relate to youth.	0	0	0	0	0
Lack of proper education regarding mental health issues is a significant barrier to accessing mental health services.	0	0	0	0	0
Lack of awareness regarding available resources is a significant barrier to accessing mental health services.	0	0	0	0	0
If there is something providers courelate to youth, what would that b	ıld do to better e?				
relate to youth, what would that be Comments: About Me	e?				
relate to youth, what would that be Comments:	e?	a family member other than parents	my foster home	my friends	no fixed addre
relate to youth, what would that be Comments: About Me	owing my mom and/or	other than	my foster home	my friends	no fixed addre
relate to youth, what would that be Comments: About Me Please select one of the foll	owing my mom and/or dad	other than parents		·	

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Previously			
Please select one of the followi	ng		
	Yes	No	I would rather not say
I have tried to access mental health services in the past	0	0	0
If you answered yes to the above question, were you satisfied with your experience?	0	0	0
Are you aware of the following	existing communit	y services?	
	Yes	No	I would rather not say
School Plus	\circ	0	\circ
St. Martha's Mental Health and Addiction Services	0	0	0
Family Services of Eastern Nova Scotia	0	0	0
Are you aware of these online i	esources?		
	Yes	No	I would rather not say
KidsHelpPhone.ca	\circ	\circ	\circ
Teenmentalhealth.org	0	0	0
Additional Comments:			

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