

Understanding youth experiences and information needs related to online mental health
searching: A qualitative descriptive study

by

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Abstract

Background: A study of the mental health of Canadian youth from 2011-2018 showed an increase in the prevalence of perceived poor/fair mental health (1). Yet, many youth do not access mental health services provided by a health care provider. The most common help-seeking approach among youth is an online text-based search (2). Currently, there is much research on youth mental health help-seeking, and online searching, but little is known about how youth search for mental health information online. The objective of this study was to understand how Canadian youth search for mental health information in online contexts (e.g., internet, websites, social media).

Methods: Semi-structured interviews were conducted, taking a qualitative descriptive (QD) approach. Purposeful sampling was used to recruit Canadian youth (ages 15-24 years) with experience searching for mental health information online. Recruitment occurred virtually (e.g., social media) between June and August 2021. Youth were engaged in individual interviews online via Zoom and completed a brief demographic survey online. Interview questions followed three lines of questioning, from broad to more narrow questions. Youth were interviewed on how they search for mental health information online, what type of information is helpful, and how they determine what information is trustworthy. Youth were compensated with a \$15 gift card. Data collection and analysis proceeded concurrently. Braun and Clarke's approach to thematic analysis (TA) was used; NVivo software facilitated data management. An audit trail and reflective journaling were maintained throughout the study to enhance rigor. Youth partners were engaged at the onset of the project to assist in developing study processes that were considered youth-friendly and to provide input on the interpretation of results from youth perspectives.

Youth partners advised on study materials, participant recruitment strategies, data analysis, and dissemination of the results. Rickwood and Thomas' Help-Seeking Framework was used to contextualize the findings and provide terminology to the themes.

Results: Fourteen youth participated in interviews (mean duration 38 minutes). Youth were most commonly of Asian ethnicity (n=8), female (n=10), in high school (n=10), and living in Alberta (n=10). Four main themes were developed from the data: (1) Mindset shapes the search process, (2) External factors shaping the search process, (3) Key attributes of helpful information, and (4) Cues affecting trustworthiness of online information. Youth described that their mindset (i.e., elevated emotional state or curious/learning mindset) influenced key elements of how they searched for mental health information online. Youth also described factors external to the search process that influenced how they search—information learned in school, their parents' perspectives of mental health, and available time—and described a preference in accessing and using the information that they perceived as helpful and trustworthy. Youth expressed that helpful information has specific characteristics (e.g., the information provides next steps, uses appropriate language, is easy to find, and meets youth's needs) and that specific cues within online information (e.g., links at the top of the search results, information design and format, consistency of information across sources, and the source of the information) affect their perceived trustworthiness.

Conclusions: With youth more commonly seeking mental health support online, understanding how youth search for this information is critical. This project identified four themes of relevance to how youth search for mental health information online, elements of information that are helpful to youth, and factors influencing the perceived trustworthiness of this information. This

research generated relevant knowledge for youth education and the development of youth-friendly online mental health information that is perceived as helpful and trustworthy by youth. Ensuring youth have access to quality online mental health information, accessible to how they search for it, is critical to the mental health and development of youth.

Preface

This thesis is original work by Megan Pohl. The research project described in this thesis received research ethics approval from the University of Alberta Ethics Board, Project Name, “Understanding the Online Mental Health Information-Searching of Youth: A Qualitative Descriptive Study”, No. Pro00109735.

It is anticipated that portions of Chapters 2-4 will be published in an academic journal. I was responsible for study design, data collection and analysis for this project as well as the manuscript composition. Dr. Lisa Hartling, Dr. Sarah Elliott, and the youth partners were involved in study design, data analysis, and manuscript composition. Dr. Mandi Newton and Dr. Shannon Scott provided input on study design and interpretation of results.

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I would like to acknowledge the invaluable love and support provided by my friends and family throughout this degree. There is a long list of friends that brought me joy through long coffee breaks, comic relief, marathon training, and maybe even a trip to Italy. This list includes but is not limited to: Kelsey Tollefson, Mary Labib, Jordan Wong, Raeann Del Colle, Robby Graham, Ben Keymer, Emily Downey, Aspen Lillywhite, Kelly Gardiner, and Jill Kresik. Thank

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To my parents, Carrie and Darren Pohl, who have always believed in me: thank you. Mom, your *many* food deliveries were not in vain. To my sisters, Kaitlyn and Mikayla, who have always been there for me: being your big/little sister is truly such an honor. I would like to thank my Oma, Opa, and Paw for expressing unnecessary interest and support to me during this period.

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Chapter 1: Background

1.1 Mental Health Concerns Among Youth and Online Searching for Information

For 10% of children and youth, mental health concerns significantly affect their day-to-day life (3). For the purpose of this study, ‘mental health’ refers to one’s emotional, psychological, and social well-being (4), and ‘mental health concerns’ reflects any concern that a youth might have with their well-being (e.g., anxiety, difficulty coping, bullying, etc.). In this project, ‘youth’ refers to those aged 15-24 years.

In recent years, understanding youth’s mental health concerns has become increasingly important. There has been a trend in the increasing prevalence of mental health concerns, specifically related to anxiety and depression, effecting youth as they transition into adulthood (5). Further, the COVID-19 pandemic has had a negative impact on the mental health of Canadian youth above all other age groups in Canada: pre-COVID, 60% of youth reported excellent or very good mental health and in July 2020, this number had dropped to 40% (6).

Youth use various methods to search online for information for their mental health concerns. For the purpose of this study, searching for mental health information online is a form of ‘help-seeking’ restricted to the internet (see section 1.3: Youth’s Online Mental Health Help-Seeking and Information Searching). In a survey study, 30% of youth participants indicated that they had previously used the internet for mental health information (7). In contrast to in person approaches, mental health help-seeking online is often self-initiated by youth (8). The device used to conduct searches and seek help can vary. In a survey study of youth’s online help-seeking for mental health concerns by Pretorius et al., 80% of youth reported they would use

their phone to search (9). While using a computer has also been reported (10), only 33% of participants in the study by Pretorius et al. indicated they would use it (9).

Further, youth have reported that they would search for online mental health information through various sources. For instance, 82% indicated they would use an internet search, 57% a health website, and 32% a forum or discussion board (9). Fewer participants indicated that they would go to a social media influencer or blogger (8%) or a mental health application (12%) (9).

Youth use different types of searches for online information for their mental health concerns. In 2019, a systematic review identified a text-based internet search as the most common online help-seeking approach taken by those under 25 years for mental health concerns (2). A text-based search involves entering text into a search engine. Other online approaches to searching for support for mental health concerns include accessing social media, government or charity websites, live chat functions, and online communities (2).

1.2 Access and Availability for Youth Seeking Mental Health Information and Support Online

Presently, there is a multitude of online mental health information available for youth. This information can be delivered through many means including webpages, social media videos and posts, online forums, discussion boards, applications, and blogs (2,9). Further, this information can focus on mental health literacy, as well as mental health promotion, prevention, and treatment. Mental health literacy includes knowledge and awareness to recognize mental health symptoms, supports, and treatments, and aids in the recognition, prevention, and management of mental health disorders (11). An example of a resource to support mental health literacy is a webpage describing the signs and symptoms of a mental health condition and when to seek support. Online promotion interventions “focus on enhancing the strengths, capacity and

resources of individuals and communities to enable them to increase control over their mental health and its determinants,” while a prevention intervention aims to decrease the “incidence, prevalence or seriousness of targeted mental health problems” (12). Finally, internet-based treatment interventions provide therapy to those with psychological problems through online therapy and/or web-based treatment programs (13).

Of the online mental health information available, quality is variable. A study examining the first 20 search results from popular search engines for 11 common mental health terms found that 51% of identified websites were classified as commercial (i.e., business oriented, having advertisements, and/or for profit) (14). A correlational analysis found a negative relationship between the commercial status of these websites and website quality (14). However, 67% of the websites identified had content of “good or better quality,” with search engines regularly returning users with good quality mental health information (14). It is anticipated that with time, online mental health information, including mental health literacy resources, will continue to increase in quality (15).

Other forms of online mental health information, such as social media posts, YouTube videos, and blogs, are not able to be assessed for quality in the same way as websites. Specifically, the literature has raised concerns about the quality of online mental health information available on social media (16,17). This is partially due to the promotion of popular content on social media regardless of the trustworthiness of the source of the information (17,18). Uncertainty of the trustworthiness of online mental health information is one of the multiple limitations that youth face in mental health help-seeking online (2).

Currently, there are a variety of efficacious online mental health supports, including promotion and prevention interventions available to youth. A systematic review of the online

mental health promotion and prevention interventions for youth highlighted the potential for online interventions to reduce mental health concerns and promote youth well-being (12). This 2015 review identified 28 studies: eight of these studies evaluated online mental health promotion interventions and 20 of these studies evaluated online mental health prevention interventions. Of the studies evaluating preventative interventions, 67% evaluated module-based computerized cognitive behavioral therapy (cCBT) to prevent depression and/or anxiety. Other promotion and prevention interventions included an online stress management program, a mobile self-monitoring mood application, and a blogging program. The intervention outcomes for cCBT had positive findings for reducing mental health concerns for youth amongst other efficacious online promotion and prevention options (12).

Despite the diverse online mental health information and effective online promotion/prevention intervention options available, most youth do not access mental health resources for a number of reasons (19). Important barriers to online help-seeking for youth's mental health concerns include not finding the information that they need, perceived stigma, limited mental health literacy, and financial barriers/cost (2,11,20–24).

Not finding the online mental health information that youth need prevents their access to and benefit from online mental health information and may poorly impact their perceptions of the helpfulness of online mental health information. A systematic review by Kauer et al. identified 18 studies to assess if online mental health services improved mental health help-seeking for those aged 16-26 years (20). Of the 12 cross-sectional studies identified, only 52% of all help-seeking youth reported that they found the information they wanted (20). Not finding the online mental health information that youth need has the potential to impact youth's perceptions of the availability and accessibility of online mental health information. Unfortunately, poor

perceptions of the availability and accessibility of mental health services and supports has been reported as a barrier for seeking help for mental health related concerns (23,25).

There is extensive literature discussing perceived stigma as a barrier for those seeking mental health information and support online and in person. A 2015 systematic review of 144 studies reported that stigma had a small to moderate sized negative effect on in person mental health help-seeking (26). Searching for mental health information online has potential for greater privacy and anonymity when searching, especially when using specific search strategies such as incognito mode. A systematic review by Pretorius et al. addressed youth's online mental health help-seeking (2). In this review, three studies reported that youth went online so "they could share their feelings without fear of judgement or labelling" and experience greater privacy (2). Although online help-seeking allows for greater privacy with the potential for less stigma than in person help-seeking, concerns about privacy and stigma still exist when searching for mental health information online (2,27). Specifically, youth have described worries about a lack of privacy being linked to stigma of others finding out about their mental health concerns when online mental health help-seeking (27). Youth are disproportionately deterred from mental health help-seeking because of stigma compared with other age groups highlighting the importance of online help-seeking options that protect anonymity and privacy (26).

Limited mental health literacy has been identified as a barrier to mental health help-seeking for youth in person and online (2,25,28) as it prevents youth from acting on the appropriate cues to seek mental health support and identifying where to go when support is indicated. In the context of online mental health help-seeking, the literature has reported that low mental health literacy negatively influences youth's ability to access helpful and reliable information and supports (2). Lack of knowledge of the indicators of online information quality

and uncertainty about the trustworthiness of online sources have been raised as concerns of youth help-seeking for mental health online (2).

Further, financial barriers and cost serve as notable barriers to youth seeking mental health information and support in person and online (11,24). In a survey study of barriers to mental health help-seeking for those aged 18-25 years, the most commonly-rated barrier to in person mental health help-seeking was cost, with 67% (n=116) of total participants reporting this as a barrier (23). The development of cost-effective online mental health interventions has been suggested to help mediate this barrier to accessing mental health support (11,29); however, these interventions may still not be accessible to all youth. Additional financial barriers to searching for mental health information online include access to or ownership of private devices for searching (e.g., personal phone, tablet, computer). To search without access to private devices, youth may need to use public options (e.g., library computer), having the potential for more negative implications for privacy, anonymity, and stigma.

1.3 Youth's Online Mental Health Help-Seeking and Information Searching

Help-seeking is an “adaptive coping process that is the attempt to obtain external assistance to deal with a mental health concern” (19). One strategy for mental health help-seeking is through an online search. An online search involves unguided internet use to obtain information; online searching can include the use of search engines (e.g., Google, Bing, Yahoo) and social media platforms (e.g., YouTube, Instagram). A survey study asked 1308 young people under 25 years what online sources they would go to for emotional and personal concerns: 83% of survey respondents reported using an internet search (9). Further, for youth experiencing

psychological distress, it is both preferred and more common to seek mental health support online than help from in-person sources (2,9,30).

Youth's priority needs when online mental health help-seeking include privacy of disclosure, convenience, effectiveness of the identified online resource in reducing psychological distress, and accessibility (i.e., the resource is easy to use and free of cost) (31,32). These needs are well aligned with the benefits and facilitators of online help-seeking which include greater privacy, ease of access, reduced stigma, and an increased sense of autonomy over the help-seeking experience (9).

Online mental health help-seeking may be beneficial for self-reliant individuals and has been highlighted as a gateway for youth to seek further mental health support via treatment and early interventions (2,33–35). Searching for this information enables youth to decide if they need to and/or wish to seek further help from mental health professionals (2,33). Moreover, adolescents view the internet as an accessible source for health information which may inform conversation topics that they bring to a health professional (36).

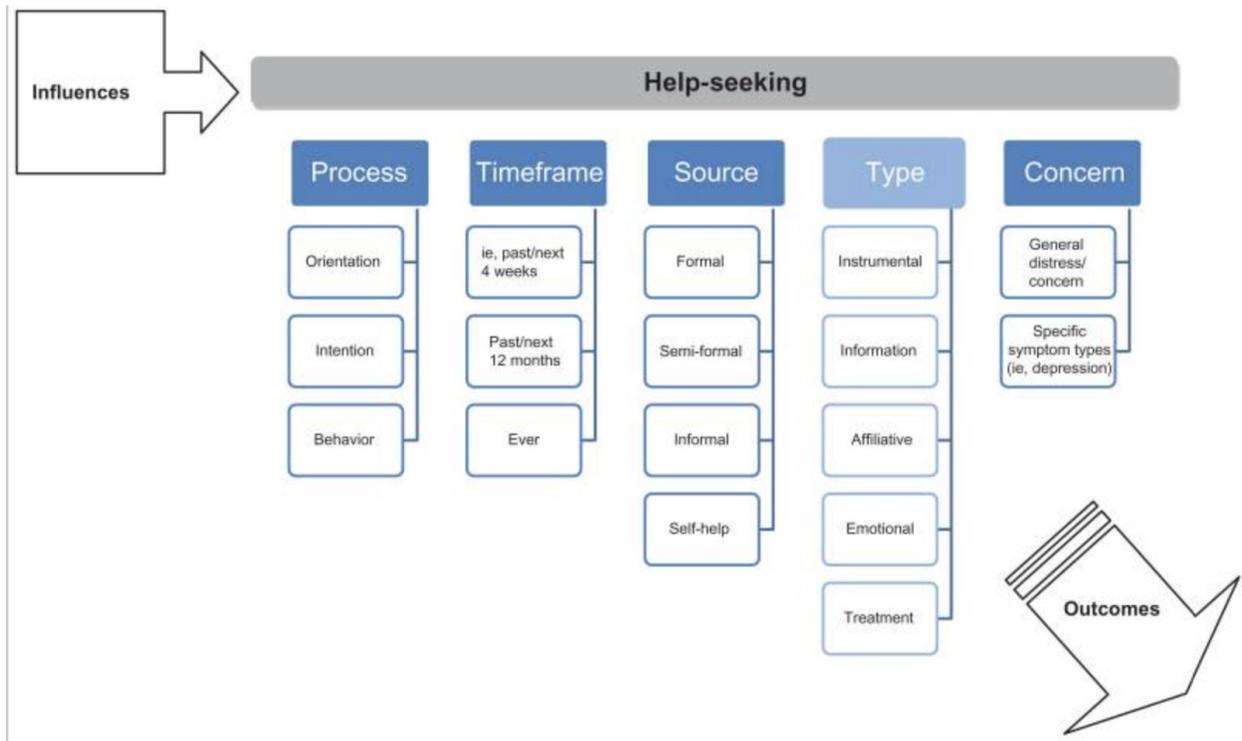
Although the barriers and facilitators of youth's online mental health help-seeking behaviors have been explored, we have a limited understanding of the characteristics and patterns of youth's online searching for mental health information (i.e., how do they search; what do they perceive as helpful; what influences their search?) (2). The absence of a model or framework specific to how youth search for mental health information online, or more broadly, help-seeking for mental health online, highlights this gap in our present knowledge (2). Specifically, the literature has identified that it is important that we develop an understanding of the characteristics of how youth are using the internet to seek health information (37) and that the relationships between attitudes/orientations and the behavior of mental health help-seeking are

further explored (19). Understanding youth preferences and online information-seeking behaviors will allow for the informed dissemination of quality resources to the online locations that youth will most likely find them, in formats that are most relevant, and including content of most value to youth.

Rickwood and Thomas' Help-Seeking Framework for mental health problems outlines online information-searching as a specific type of help-seeking restricted by the medium of the search (i.e., online) and the type of support sought (Figure 1). This conceptual measurement framework allows for the conceptualization of specific help-seeking terms which provides value by increasing the consistency of the terminology used within the help-seeking literature (19). This consistency will support the comparison of results across various studies. However, the systematic narrative review published in 2019 by Pretorius et al. has identified that, to date, there has been limited use of theoretical models for the conceptualization of online mental health help-seeking in the literature (2).

To understand the discussion of this project, awareness of the definitions of key concepts within this framework may be beneficial. Within the help-seeking measurement framework, 'Influences' are notable factors that "determine the initiation and progress of the help-seeking process" (e.g., mental health literacy) (19). 'Outcomes' are not specifically defined, but the figure suggests that outcomes stem from or are the result of help-seeking (19). Types of support include instrumental, informational, affiliative, emotional, and treatment (19).

Figure 1. Rickwood and Thomas' Help-Seeking Measurement Framework



Note: a conceptual measurement framework for help-seeking for mental health concerns including elements of the process of searching, the timeframe, the source, the type of support sought, and the concern. Reprinted from “Conceptual measurement framework for help-seeking for mental health problems,” by D. Rickwood and K. Thomas, 2012, *Psychology Research and Behavior Management*, 5, p. 173-183. Originally published by and used with permission from Dove Medical Press Ltd.

1.4 Youth Engagement in Research

Research has emphasized that steps need to be taken to increase the engagement of youth in mental health research (38,39). Literature that describes the impact of youth engagement in the design, process, and dissemination of research is growing (40,41). Youth engagement is the involvement of youth in research projects. Youth engagement can take many forms (e.g., inform, consult, involve, collaborate, empower) (42), but there has been a shift towards engaging youth as research partners throughout a research project when possible (40,43). Many healthcare organizations are moving towards a more consumer-oriented approach with engagement occurring at multiple stages of the research process (e.g. protocol development; data collection, analysis and interpretation; and identification of next steps post-project) (44–46). The benefits of increased youth engagement are trifold.

First, a large body of evidence indicates that patient and community engagement leads to more pertinent findings with enhanced relevance to the study population (44,47–50). A 2014 systematic review by Domecq et al., reviewed 142 studies with aims to identify the benefits of patient engagement (47). Benefits of patient engagement included improving participant enrollment, and the dissemination of results in a more understandable and meaningful way to the relevant knowledge users (47). Notably, it has been suggested that engaging partners with lived-experience in a research domain enhances the level of available input and expertise which can result in greater rigor in decision-making throughout a research project (44,51). In turn, this may increase the credibility of results.

Second, engaged youth can experience skill development, social engagement, and empowerment (40,41). It has been suggested that shared decision-making between youth and adults in research contexts allows for youth to be exposed to different ways of thinking and

problem-solving which can strengthen their cognitive and social development (51). Observing the effects of youth's contributions to research can be empowering and build self-efficacy and self-esteem in youth (51).

Third, the trend towards greater patient involvement in research is associated with an increase in effective knowledge translation and dissemination of study findings to the communities of interest (41,46–48). In literature addressing meaningful engagement of youth in mental health research, the benefits of engaging youth such as the increased efficacy of designed interventions and that the language of generated materials is more appropriate and youth-friendly, may partially explain the more effective knowledge translation and dissemination for studies that have implemented youth engagement (46,52,53).

There are multiple barriers and facilitators to engaging youth in mental health research. In 2019, Faithful et al. conducted a qualitative study where 19 mental health researchers who had previously implemented youth engagement in their research were interviewed (46). Barriers included challenges with qualitative research not being as valued or accepted by their colleagues compared to quantitative projects, lack of resources to engage youth (i.e., time and money), and limits to researchers' understandings of how to practically engage youth in research (46). These findings have also been reported in the existing literature unspecific to mental health research (54). Earlier studies have identified barriers more specific to mental health research; studies have highlighted that prejudiced beliefs and stigma towards youth may negatively impact youth engagement in research (38,55,56). These prejudiced beliefs were related to youth's age (i.e., ageism) and their mental health status, and were presumed to negatively impact the uptake of youth's input to research projects (55,56). However, in the 2019 study by Faithful et al., not one of the qualitative researchers interviewed indicated that youth's mental health may prevent them

from contributing to research (46). This finding may suggest decreasing prejudiced beliefs towards the impact of youth's mental health affecting their ability to contribute meaningfully to research.

There are many recommendations for facilitating the engagement of youth in mental health research. Recommendations from the McCain Model of Youth Engagement (Figure 2) include the mentorship of youth, allowing for flexibility, promoting authentic decision-making, and reciprocal learning for youth and researchers (39). Intentional mentorship in areas of skill development that are of interest to youth has been highlighted as beneficial (39). Flexibility in the research environment and schedule is important so that youth, especially those with mental health concerns, can meaningfully contribute to research projects (39). Authentic decision-making has been demonstrated through youth's active participation throughout various stages of research projects, being recognized as equal team members, and the implementation of youth's input: this approach avoids the potential for "tokenism" and not reaping the benefits of authentic youth engagement (39,57). Further, when each research member is viewed as an expert in an area and able to teach other members of the research team, reciprocal learning can occur. Reciprocal learning allows for greater youth engagement and can benefit research projects by teaching adult researchers about youth's areas of expertise thus enhancing the "youth-friendliness" of projects (39).

Given the sensitive nature of this research topic (i.e., mental health), there are some unique considerations for youth engagement. Power dynamics between youth and adult researchers may negatively impact youth's engagement (40). Within mental health research, engaging youth with mental health concerns may further emphasize this power imbalance, as stereotypes, stigma, and assumptions can exist (56). Discounting how different aspects of

research emphasize youth's vulnerability (e.g., adult researcher's judgements, bias, prejudice) has been a concern emphasized by the literature (38). It has been suggested that authentically engaging youth in mental health research, demonstrating interest in youth's input, and creating youth friendly research environments may begin to disassemble these power imbalances (38–40).

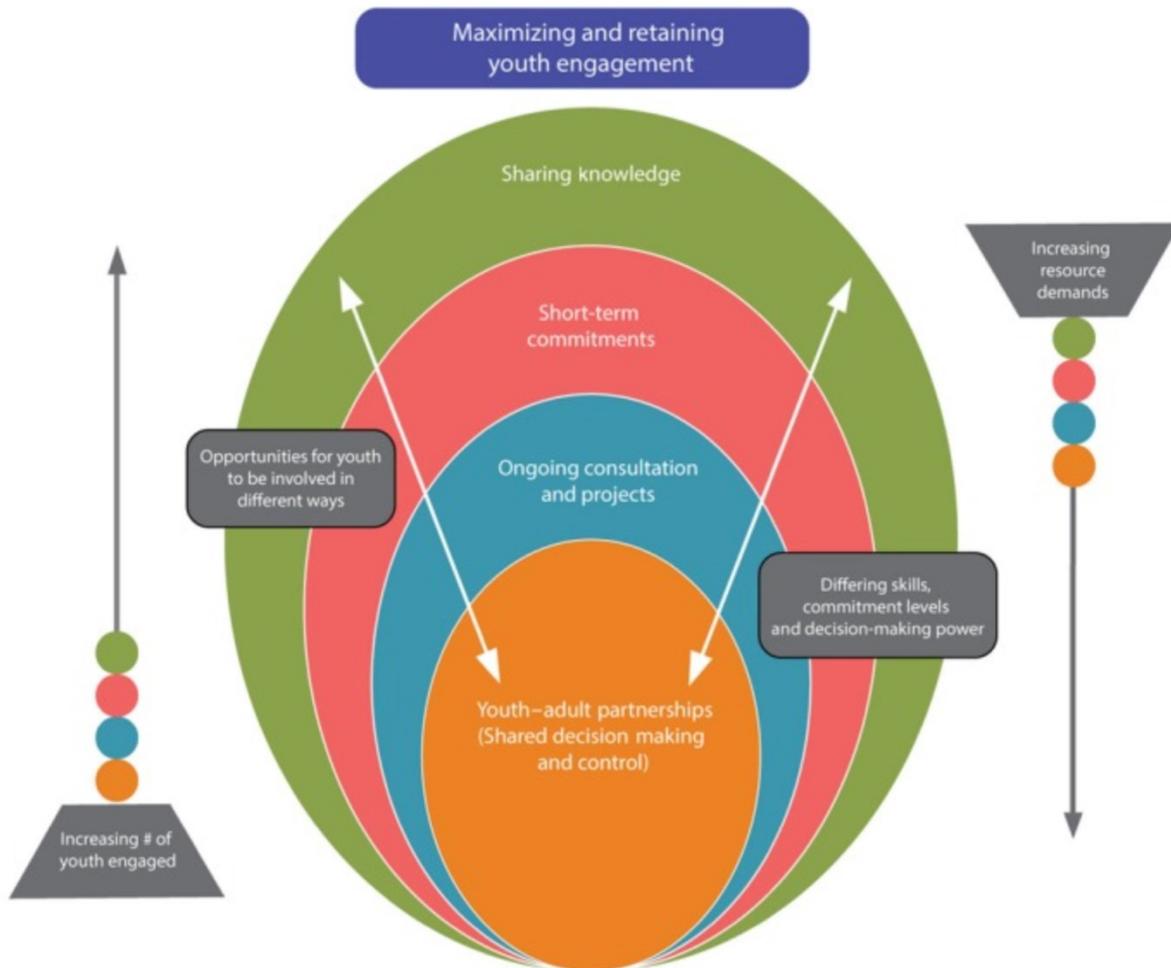
1.4.1 The McCain Model of Youth Engagement

The McCain Model of youth engagement provides an evidence-informed conceptual framework for strategies to engage youth in research (39). Different types of youth engagement are more suitable for different types of projects. This framework is flexible to match a broad-spectrum of project needs depending on the desired level of youth engagement, skill, and interest (41). It has been suggested that higher levels of engagement should be accompanied by a fewer number of engaged youth (41). Types of youth engagement are broken down into four categories from least to most engaging: participation, consultation, partnership, and youth-led (41).

Emphasizing flexibility, mentorship, mutual respect, authentic decision making, and reciprocal learning, the model encourages increased collaboration between researchers and youth (39,41).

Youth partnership is a type of youth engagement. Characterized by equal partnership with researchers, partnership allows youth to actively collaborate on a research project and provides the opportunity to lead research activities (41). Mental health research projects have demonstrated benefit from the increased input warranted by a youth partnership engagement approach (39,58). Within the literature on youth engagement, it has been emphasised that youth be included in projects as full partners when possible (40,43). Youth are key contributors to decision-making and are trusted to “make decisions that directly influence team projects and outcomes in their own lives” (19, 25).

Figure 2. The McCain Model of Youth Engagement



Developed by Herzog, T., Heffernan, O., Chaim, G., and Henderson, J. (2014)

Adapted from Hampton's Model of Civic Youth Engagement:
 Carlson, C. (2006). The Hampton experience as a new model for youth civic engagement. *Journal of Community Practice*, 14(1-2), 89-106.

Note: a conceptual framework of how the level of youth engagement in research may impact the number of engaged youth, corresponding resource demands, commitment level, youth's decision-making power, differing skills, and opportunities for youth involvement. Reprinted from "Implementation of a youth-adult partnership model in youth mental health systems research: Challenges and successes," by O. Heffernan, T. Herzog, J. Schiralli, L. Hawke, G. Chaim, and J. Henderson, 2017, *Health Expectations*, 20(6), p. 1185. Copyright 2017 by The Authors Health Expectations Published by John Wiley & Sons Ltd.

1.5 Purpose/Research Question/Objectives

The aim of this study was to understand how youth search for mental health information online: specifically, exploring what online sources youth are searching for mental health information (e.g., self-help sources such as unguided website use, informal sources such as online social networks, or formal sources such as websites or contact information for professional health service providers), the process that youth follow when searching, the type of information sought (e.g., psychoeducational information, social support, referral for therapy), and their perceptions of what is helpful and trustworthy. To meet this goal, youth were engaged in a qualitative descriptive study in which inquiry followed three lines of questioning:

- 1) What is the process that youth follow when searching for mental health information online (i.e., where do they look; what are the barriers/facilitators that they have faced)?
- 2) What type of online mental health information is perceived as helpful by youth (e.g., online psychoeducation, social support, referral for therapy)?
- 3) How do youth determine if online mental health information is trustworthy?

The benefits of understanding how youth search for mental health information online are trifold. First, it is anticipated that this research will inform the thoughtful creation of mental health resources that meet the needs of youth. Secondly, this study may inform knowledge translation (KT) strategies regarding where and how to disseminate online mental health information so that it is responsive to how and where youth search. Lastly, this work highlights new avenues for continued research in this area and provides background for the development of a conceptual model in this domain.

Chapter 2: Methods

The reporting of this work adheres to the Standards for Reporting Qualitative Research (SRQR) checklist (59) to enhance the transparency of the research process (59,60). Approval from the University of Alberta Health Research Ethics Board (Pro00109735) was obtained prior to launching this project.

2.1 Study Design

This study followed the qualitative descriptive (QD) approach as described by Sandelowski (2000, 2010) and Neergaard (2009) with elements of Community-Based Participatory Research (CBPR). Components of CBPR were demonstrated through youth partnership and included stakeholder/community engagement.

2.1.1 Rationale for a Qualitative Descriptive Approach and Theoretical Orientation

A QD approach was deemed appropriate for this work, as a comprehensive and straightforward description of a phenomena, rooted in real life contexts, was desired (61). Given the descriptive and nuanced nature of searching for mental health information online, a qualitative approach is appropriate (61). In situations with imposed time constraints (i.e., a master's thesis), a qualitative descriptive approach can be more suitable than more resource intensive approaches such as grounded theory or CBPR (63).

QD research is “less theoretical” than other qualitative methods but it is informed by a philosophical orientation (64). Underpinning QD, a naturalistic orientation is an approach to studying something in its natural state (61). Keeping with a naturalistic perspective, this study is without a prior commitment to any theoretical view or pre-conceptualization of the variables to be discovered (61,62). Maintaining methodological coherence with the QD approach, purposeful

sampling was used to recruit participants that could provide a rich description of their experience searching for mental health information online (65).

2.1.2 Community-Based Participatory Research and Youth Partnership

The CBPR perspective values collaboration, equal partnership, trust and commitment to the community of interest (66). Three youth partners were recruited from Canadian youth research groups (i.e., KidsCan and the Edmonton Council) to help develop and advise on key elements of the study design. Youth partnership was important to this project to enhance the youth-friendliness of study materials and provide insight to study findings from a youth lens. Youth partnership was defined according to the Innovate Youth Engagement Guidebook for Researchers, where youth were treated as equal partners with researchers and were actively involved in research activities and provided the opportunity to lead some study elements (i.e., designing recruitment materials) (41). Youth partners were directly involved in study design, data interpretation, and providing their input on the results, and editing the manuscript in alignment with the McCain Model of Youth Engagement (40). For more information on youth partnership please refer to Chapter 6, 6.2 Youth Partner Involvement at Key Stages of the Project.

2.2 Sample Description, Inclusion/Exclusion Criteria, and Sample Size

English-speaking Canadian youth aged 15-24 years with experience in online mental health information-searching were invited to participate in this study. Exclusion criteria included: those <15 years or >24 years, not identifying as Canadian, and not having searched for mental health information online. For those under 18 years, only youth able to demonstrate decision-making capacity were included.

Decision-making capacity was assessed in alignment with the WHO's tool for assessing and supporting adolescents decision-making capacity and procedures to assess decision-making capacity were approved by the University of Alberta Ethics Board (67). Capacity was assessed by me in a one-on-one phone call where key study elements, potential risks, consent, confidentiality, and study withdrawal procedures were explained. Potential participants were provided the opportunity to discuss the study with me and ask questions. Afterwards, youth were required to answer questions about their understanding of the risks of the study, their choice to participate, and withdrawal procedures correctly to be considered as having decision-making capacity and able to participate in this study. All potential participants needed to answer all questions correctly in order to participate in the study.

For this project, data saturation was used to determine sample size (68). Data saturation was defined as "when no new data directly applicable to the research question was obtained through additional interviews, and the researchers felt they had enough information to address the research question and say something important about it" (68). Data saturation was assessed by me in consultation with the research team throughout data collection to ensure that there was redundancy in key categories to verify completeness. Major concepts were verified (i.e., redundancy was observed across interviews) while others left hypothetical to ensure a rich and developed understanding of key categories (69). From previous literature in this area, it was anticipated that 10-15 interviews would be sufficient to achieve saturation of key themes (64,70,71).

2.2.1 Justification of the Inclusion/Exclusion Criteria

A sample of Canadian youth was deemed appropriate for this study for the following reasons: 1) Canadian youth partners and Canadian youth advisory groups provided input on the design, analysis, and dissemination of the results of this study to Canadian contexts; 2) due to feasibility limitations, advertising for participant recruitment was in English and targeted to local audiences via social media posts and through youth partners' research networks; and 3) including equal representation of international youth was considered unlikely given the size and scope of this study. Further to this last point, including international perspectives could have revealed fundamental differences in information-searching behaviors across countries which may have necessitated analysis beyond the scope of this project. Additionally, KT strategies developed from the results of this project need to be suited to and adapted for local contexts, so international perspectives may not be relevant to the outputs of this project.

Only participants aged 15-24 years were recruited. This age range falls within the definition of youth used by the McCain Model of Youth Engagement (i.e., aged 15-28 years), the guiding framework for youth partnership in this study (41). Other Canadian and global organizations (i.e., Human Resources and Skill Development Canada and the United Nations) also define youth as aged 15-24 years. Recruited youth partners were also in this age group and it was expected that recruitment materials, data analysis, and dissemination of the results would be most applicable and meaningful for youth aged 15-24 years.

2.2.1 Recruitment

Study recruitment occurred between June 2021 and August 2021. Participant recruitment strategies included advertisement to Canadian youth research advisory groups with which we have established relationships (e.g., Alberta Children's Hospital Child and Youth Advisory

Group (CAYAC), Stollery Children’s Hospital Youth Advisory Council (YAC), and KidsCan [national network]), word of mouth (i.e., by youth partners to their research networks and previously enrolled participants to their friends/acquaintances), and social media advertisements (i.e., Instagram, Twitter). Please see Appendix G for a full list of the Canadian youth research groups contacted. Youth partners advised on recruitment methods and created recruitment materials (i.e., social media posts) to ensure that recruitment strategies were youth-friendly. The ‘youth-friendliness’ of recruitment strategies describes the use of youth-appropriate language, graphics appealing to youth, and using recruitment strategies that youth partners believed would reach other youth (e.g., social media advertisements).

All youth that contacted me through email or phone about study participation were sent the Information Letter (Appendix A) and provided the opportunity to discuss the study with me and ask questions. For potential participants under 18, decision-making capacity was assessed before obtaining consent. Written informed consent was obtained from all participants. All youth had a conversation at the beginning of their interview to review their choice to participate in the study and the on-going nature of their consent.

All participants were offered a \$15 coffee gift card as a token of appreciation for their time completing the study. As recruitment continued, I began interviewing participants from demographics underrepresented in the earlier sample (i.e., male, aged 20-24 years) to achieve more equitable representation in attempts to enhance the generalizability of the study’s results.

2.3 Youth Partnership

Three youth partners were involved in this project and were considered equal research partners, not study participants. In alignment with the McCain Model of Youth Engagement,

more engagement was desired for this long term project so fewer youth were engaged at a higher level of engagement (i.e., youth partnership) to support shared decision-making and commitment (39). During meetings with youth partners, direction on the study design (i.e., using interviews or focus groups), interview guide, recruitment strategies, data analysis, interpretation of the results, dissemination strategies, and writing up the results were provided. Youth partner engagement was guided by the key attributes of the McCain Model of Youth Engagement: flexibility, mentorship, authentic decision making, and reciprocal learning. A detailed plan for youth engagement was developed (Appendix D) to help guide expectations and timelines etc. Further details on how youth partners were engaged in this study are provided in Chapter 6: A Reflection on Youth Partnership.

2.4 Data Collection

2.4.1 Demographic Survey

All demographic data were collected anonymously prior to each participants' interview through an online questionnaire (Appendix B) shared through RedCap, a secure, online platform used for data collection and storage. Collected demographic data included: age at the time of the study, city/town/community of residence, gender, ethnicity, education level, presence of siblings (i.e., yes, or no), and rural or urban residence. These data were used to describe the study sample and to provide contextual understanding to the results.

2.4.2 Individual Interviews

Individual semi-structured interviews were conducted with all study participants online using Zoom (online video/telephone conferencing platform). Youth partners were consulted on whether focus groups or individual interviews would be a more appropriate way to collect data

from youth participants. Youth partners thoughts aligned with the literature in that individual interviews may be a more appropriate context to engage participants given the sensitive nature of the topic of interest (72). The semi-structured format of the interviews allowed for key aims of the study to be addressed through specific questions while providing flexibility for participants to address related experiences and questions as codes were developed. Data collection and analysis where iterative and occurred concurrently throughout this study.

All interviews were conducted by me (i.e., a graduate student). I am female, had received qualitative training in conducting interviews through a qualitative research graduate class and extra learning opportunities (i.e., meeting with qualitative research professors, attending qualitative research seminars, and individual readings), and at the time of the study was a youth with previous experience searching for mental health information online. I had no relationship with the study participants prior to the study. The participants were informed that I was a graduate student at the University of Alberta; no other information about me was reported to participants.

The participants were asked to take part in the interview from a quiet, private location to minimize distractions. No one else was present at the interview. The semi-structured interview guide was developed prior to the interviews, and pilot tested with three youth, one of whom was an individual not otherwise involved in the study (i.e., personal contact), and two of whom were youth partners. All feedback provided by youth around question wording, order, and organization was incorporated into the final interview guide. The interview guide was also modified over the course of the study to reflect questions brought up by the data (see Appendix C for the final and modified interview guide). At key points during data collection, youth

partners were consulted to provide insight into additional lines of questioning to explore. These insights were incorporated into the interview guide.

During and after the interviews, I recorded field notes of general impressions of the participant's demeanor, thoughts and statements that the participant emphasized, and take away messages. I met regularly with the primary supervisor (Dr. Lisa Hartling) and member of the supervisory committee (Dr. Sarah Elliott) to debrief about the interview progress and highlight emerging ideas.

2.5 Data Analysis

Demographic data was analyzed using RedCap to generate the mean and standard deviation of youth's age. All other demographic data was reported categorically using percentages. All interviews were audio recorded and auto-transcribed using the Zoom auto-transcription function. I reviewed all the generated transcripts to ensure they were transcribed verbatim. While listening to the audio files, I reviewed the rough transcripts, modified, and de-identified the transcripts in alignment with verbatim transcription described in Mayan's *Essentials of Qualitative Inquiry* (68). NVivo software (released in March 2020, QSR International Pty Ltd, 2022) was used to conduct data analysis.

In alignment with a QD approach, a reflexive thematic analysis was used to analyze the data. Braun and Clarke's reflexive thematic analysis emphasizes taking an inductive approach such that the data drives the development of codes and themes (73,74). Following Braun and Clarke's six phases of thematic analysis, I began familiarization with the data by re-reading transcripts, listening to audio files, and highlighting potentially codable moments (73). After familiarization, memoing of key ideas and early coding began. Early coding consisted of first,

labelling codes with tags specific to the text and implied meaning, and then the grouping of similar tags. Youth partners were consulted on the development of preliminary codes. Youth partners highlighted codes which aligned with their understanding of how youth search for mental health online and supported the modification of the interview guide. The coding team—Drs. Hartling, Elliott and I—met periodically throughout the data collection period to highlight noteworthy lines of questioning and support analysis. Preliminary codes were generated and then grouped together to build themes. Negative cases were grouped within themes to enhance theme descriptions and explanations. Codes were searched and organized for theme development with the coding team. Potential themes were reviewed, organized, re-organized, and challenged with the coding team and youth partners. Themes were defined and named by myself and reviewed and modified by the youth partners and the coding team. Final analysis included a review of all theme definitions and theme organization until consensus was reached by all researchers (i.e., the coding team and youth partners).

Data analysis was an iterative process marked by moving back and forth between the stages of reflexive thematic analysis. Themes were identified based on their relevance to the research question to help provide a rich description of the phenomena of interest (73). An audit trail was maintained, and I practiced reflexive journaling throughout data collection and analysis (75–77). Data irrelevant to the research questions were excluded from coding and analysis.

2.6 Methodological Rigor

It has been suggested that focusing on establishing trustworthiness at the end of a study, instead of focusing on verification strategies throughout the course of a research project, risks overlooking threats to a study's validity and reliability until it is too late to address them (69). Morse's verification strategies to enhance rigor were built into the research process through

investigator responsiveness and verification strategies (i.e., methodological coherence, sampling adequacy, an active analytic stance, and saturation) (69). These verification strategies were used throughout the project to “incrementally and interactively contribute to and build reliability and validity,” thus enhancing this projects rigor (69).

Guba and Lincoln’s criteria for assessing trustworthiness in studies that follow a naturalistic inquiry paradigm (i.e., credibility, dependability, confirmability, and transferability) were examined throughout the analysis and have some overlap with Morse’s verification strategies (78,79). This study used both frameworks for establishing methodological rigor in qualitative studies and will include discussion according to Guba and Lincoln’s criteria.

2.6.1 Credibility

Credibility was promoted through a prolonged engagement in the interview process, peer debriefing with coding team to discuss emerging ideas, thick description, and triangulation. Credibility was also promoted during the transcription through verbatim transcription to ensure all experiences/details were accounted for and the transcripts were reviewed along with the audio files to ensure accuracy. Finally, credibility was also promoted through the use of a thick description and triangulation. Thick description comes from the detailed account of the data, participants demographic information, and providing necessary situational and cultural context to the meanings derived (80). Triangulation was demonstrated through the cross-checking of interpretations of the data by the coding team and the youth partners, and all members challenging interpretations of the data. Further, by situating the findings in this area of research, key results are confirmed (triangulated) by other researchers. In addition to checking and challenging the interpretations of the data amongst the coding team, member reflections of developing themes were conducted with youth partners. Member reflections consisted of youth

partners outlining what codes in the data were most reflective of their own mental health online information searching experiences. These reflections provided an “opportunity for collaboration and reflexive elaboration” on the findings, further supporting the credibility of what was found (80).

2.6.2 Dependability

Dependability was promoted by involving multiple researchers in the data analysis. The coding team met periodically to discuss and reach consensus on developing codes, themes, the organization of these themes, and theme names. To add to dependability as well as transparency, a clear audit trail was recorded, documenting main decisions and my thoughts and feelings as the study progressed (80).

2.6.3 Confirmability

Confirmability was promoted through triangulation, attention to reflexivity, and memoing. The coding team reviewed data independently and together to reach consensus on developing themes. Potential themes that I posed were challenged by the coding team and youth partners. Triangulation was further enhanced by engaging youth partners throughout the theme development process to ensure that themes were reflective of the youth mental health information searching experience. Youth partners brought questions and a new lens through which to analyze the data. Further, I engaged in reflexive journaling. My reflexive journaling was documented periodically and focused on identifying potential biases, assumptions, values, and expectations that could impact the findings. Moreover, I made detailed notes outlining code choices, defining codes and themes, detailing emerging themes, and codes, developing connections between codes and themes, and challenges faced during data analysis.

2.6.4 Transferability

Transferability was enhanced by collecting and reporting the demographic data of study participants and using a purposeful sampling strategy (65). Detailed demographic data were collected from study participants using an online questionnaire prior to engagement in interviews. First, reporting the participants' demographic information adds to the transferability of the study's findings as this allows comparison of the results to what exists in the literature and helps contextualize the findings amongst what exists. Secondly, purposeful sampling allowed the collection of rich and detailed data from those that can speak to the online mental health information-searching experience of youth.

Chapter 3: Results

3.1 Demographics and Interview Characteristics

Sixteen youth reached out to participate in this study. Two potential participants stopped responding to emails before an interview could be scheduled. Fourteen youth aged 15-22 years ($M=17.6$ years, $SD=2.5$) participated in this study. Most youth were currently attending high school (71%) in Alberta (71%) or Ontario (29%), identified as female (71%), and of Asian ethnicity (57%). Additional sample demographics are included in Table 1. The average length of the recorded question segment of interviews was 38 minutes with the shortest lasting 24 minutes, and the longest lasting 54 minutes.

Table 1. Sociodemographic Characteristics of Interview Participants ($N = 14$).

Variables	Participant Characteristics
Age in years; Mean (range), Standard Deviation	17.6 (15-22), 2.5
Gender; n (%)	
Female	10 (71)
Male	4 (29)
Ethnicity; n (%)	
Asian	8 (57)
White	5 (36)
Indigenous	1 (7)
Current Educational Enrolment; n (%)	
High School	10 (71)
University	4 (29)
Province of Residence; n (%)	
Alberta	10 (71)
Ontario	4 (29)
Living with Sibling(s); n (%)	
Yes	9 (64)
No	5 (36)
Living in an Urban or Rural Location; n (%)	
Urban	14 (100)

3.2 Overarching Themes

Thematic analysis led to the identification of four main themes comprised of 15 subthemes: (1) Mindset shapes the search process; (2) External factors shaping the search process (3) Key attributes of helpful information; (4) Cues affecting trustworthiness of online information. Definitions of the four overarching themes are included in Table 2. All themes are related to the interview's three lines of questioning and aim to provide an understanding of how youth search for mental health information online.

Table 2. Definitions for the Overarching Themes from Youth Interviews

Theme	Definition
Mindset shapes the search process	How the search was conducted was influenced by the youth’s mindset i.e., being in an elevated emotional state or a curious/learning mindset.
External factors shaping the search process	Youth described how factors external to their search, such as their parents’ perspectives of mental health, what they have learned in school, and the time they have available influences how they search.
Key attributes of helpful information	Helpful characteristics of online information sources were described by youth including simple and clear language, providing next steps, and that the information was easy to find and meets the participant’s needs.
Cues affecting trustworthiness of online information	Youth described factors that influenced their perceived trustworthiness* of information. Factors were: links that show up at the top of the search results, the information’s design and format, the consistency of information across different sources, and the source of the information.

* For this project, lines of questioning related to the trustworthiness of online mental health information included discussion of the author, format, and the source of the information. The lines of questioning discussed in this study align with the literature on youth’s appraisal of the trustworthiness of online health information (81).

3.1 Theme 1: Mindset Shapes the Search Process

Searching was often described in relation to the youth's mindset at the time of search. Two mindsets were identified across interviews: an elevated emotional state and a curious/learning mindset.

An elevated emotional state was any instance of a participant describing their mood or emotions as different than their baseline in the context of searching. Participants in an elevated emotional state talked about feeling stressed, anxious, overwhelmed, or angry.

Participants in a curious/learning mindset most often described themselves as conducting a search because they were curious, wanting to learn, or searching for an answer to a question. This mindset was not marked by emotion, but simply a desire to learn driven by *intellectual curiosity*. The youth's mindset influenced elements of how the search was conducted and impacted the initiation of the search, the type of support sought, the format of the information, and how the information was used post-search.

3.1.1 Subtheme 1: Initiation of a Search

Of factors that prompted youth to begin a search for mental health information online, youth's mindset was regularly described. Different reasons for initiating a search were provided depending on the mindset of the youth.

For many youth, feeling overwhelmed and in an elevated emotional state prompted searching. As one youth stated, "*I think normally when I was searching for [online mental health information] more regularly, I was overwhelmed with things that were going on in my life, and that results in symptoms like anxiety, feeling sad, crying*" [Interview 11]. Desiring information

that could help youth feel better in that moment was described as an important reason to begin searching.

For youth in a curious/learning mindset, curiosity, or a desire to learn prompted searches. Youth in a curious/learning mindset reported that they would begin a search because they had identified a question that they wanted an answer to. As one youth described, if *“I’m interested in reading about something, or if I hear about some sort of condition that I want to learn more about, then I’ll go and search for that”* [Interview 11]. Specifically, youth described what initiated a search for information which included, *“my own intellectual curiosity”* [Interview 12] and, *“[when] I’m hit by a streak of curiosity”* [Interview 9].

3.1.2 Subtheme 2: Type of Support

Youth that described being in an elevated emotional state searched for emotional support online. For this study, emotional support was defined as any support addressing an individual’s emotional needs and well-being.

Youth’s descriptions of the type of support sought in an elevated emotional state were interpreted as marked by a sense of urgency, a need to be supported in that moment, and a desire to feel less alone. Youth in an elevated emotional state reported searching for something that could help them calm down: *“I get mad a lot so [I look for] stuff to try to calm me down, or tools to try and help me not be so mad”* [Interview 5]. When feeling especially overwhelmed, one youth talked about searching for anything that could help. Other youth in this mindset reported *“need[ing] something to reassure me that I’ll be okay”* [Interview 14].

Youth in a curious/learning mindset often described looking for informational support, which was considered online resources providing mental health information. Youth talked about

searching to satisfy a curiosity, aid their understanding of mental health, and to stay educated. For example, when youth described searching to learn more about a mental health disorder, youth talked about searching for structured information about signs and symptoms of specific mental health conditions. The informational support sought in this mindset was interpreted as less personal, as participants often talked about searching for information unrelated to their emotions: *“I’ve never searched for [online mental health information] in the context of how I’m feeling or understanding my own emotions or what I’m dealing with. I have searched up mental health to learn about it from sort of an educational perspective ... like to understand how people work”* [Interview 12].

3.1.3 Subtheme 3: Format of the Information

Youth described that when they were in an elevated emotional state the format of the information they were searching for changed. In this state, they did not find research articles helpful. When feeling overwhelmed, youth said that the advanced language of research articles was not helpful and can be *“overwhelmingly long.”* When feeling overwhelmed or anxious, they often looked for information in a video format *“because it was easier to watch a video than to read an article”* in this emotional state [Interview 11]. Videos were described as a more accessible format when in an elevated emotion state as searching for support was more difficult. Youth described watching videos that presented deep breathing exercises and grounding techniques that could be followed. Websites providing personal testimonies were also accessed to help feel less alone and described as helpful. As one youth reported, *“when [there are] higher emotions, I’m looking more for a personal testimony than actual research just to make you feel*

less alone ... so I think finding personal testimonies is more important to me when I really need something to lean on” [Interview 14].

When in a curious/learning mindset, different formats of online mental health information were sought. Youth more often visited webpages and research articles that provided information about understanding mental health or signs and symptoms of a mental health disorder. For example, one youth described that they were looking for *“a list of symptoms for depression”* [Interview 12]. For one youth who described being in a curious/learning mindset, the format of the information searched for effected its’ perceived helpfulness. The format of *“research papers can be really helpful when searching for [online mental health information] for the sake of curiosity”* [Interview 11]. Overall, the format of the type of online information that youth described searching for in this mindset was more text-based than the information sought in an elevated emotional state. A youth who had described searching in both mindsets at different times agreed with a clarifying statement that I made during the interview which asked if it was fair to say that there were different resources sought in the different mindsets they were describing (i.e., searching for personal stories in an elevated emotional state and looking for more structured information on signs and symptoms when in a curious/learning mindset).

3.1.4 Subtheme 4: How the Information Sources were used Post-search

Youth in an elevated emotional state would often act on the identified information shortly after the search. Using the information post-search was often described in conjunction with a desire to feel better as soon as possible. For example, youth in an elevated emotional state searching for deep-breathing videos described immediately watching them and implementing

their techniques: *“With the YouTube videos, it makes me feel more calm and then I can get on with the rest of the day”* [Interview 5].

Youth in a curious learning mindset often did not describe using the information after finding it. When prompted, some youth described *“stor[ing] it away in my mind and randomly think about it over the next couple of days when it comes up”* [Interview 12]. One youth described that there can be some comfort in finding information when searching from a curious learning mindset: this youth said that to find information when *“I don't know my diagnosis, or I want to learn more about my diagnosis ... feels like more of a security”* [Interview 4].

3.1.5 Subtheme 5: How the Trustworthiness of Information is Perceived

Two factors of searching in an elevated emotional state influenced how the trustworthiness of online mental health information is perceived. First, youth outlined that when they are in an elevated emotional state, they are not necessarily assessing the trustworthiness of information and that their priority is getting support in that moment. When asked about what changes how the trustworthiness of information is assessed, one youth described that, *“I think it's the emotional state, because I think we all know not to trust everything we read on the Internet”* [Interview 14]. Another youth specified that, *“if I was in a normal state of mind, then I'd be able to decipher [the information], but when I'm overwhelmed, I can't really go through that kind of advanced language”* [Interview 11]. Secondly, the resources that provide emotional support to those in an elevated emotional state are in a format that was described as difficult, if not impossible to assess trustworthiness (i.e., personal stories, videos). For example, *“with personal stories ... [the information is] based on personal experience, and I think that it's hard to judge any experience”* [Interview 11].

Youth in a curious/learning mindset described that they pay attention to cues that influence their perceived trustworthiness of information. These cues included the source of the information, the consistency of information across different sources, the links that showed up at the top of the search results, and the information's design and format. For example, one youth described that if they can see that the author is *"a doctor, at this location, and they've been practicing in this field for this [number] of years, then I can feel a little more confident about the information I'm reading"* [Interview 13]. One youth described a difference in how the trustworthiness of information is approached depending on their mindset: *"I think it depends on what mindset you're in, because if you're in the lowest of low points and you're trying to find something to help you as that first step out of your rut, I think you're just trying to find whatever information you can to help you. But if you're [searching] out of trying to grow and learn more, then I think you have more time to evaluate whether sources are trustworthy"* [Interview 14].

3.2 Theme 2: External Factors Shaping the Search Process

Youth described three key elements that influenced their searches for online mental health information: having adequate time, parents' perspectives of mental health, and information learning in school.

3.2.1 Subtheme 1: Youth Search when they have Adequate Time

Youth indicated that searches were conducted when they felt they had time. For example, one youth shared: *"[I search] whenever I'm home and have the time to actually sit down and look at multiple pages"* [Interview 13]. Youth described searching when they had finished school for the day, had extra time on the bus, or the *"later hours in the day if [they were] working*

during the day” [Interview 12]. If youth were too busy, they would post-pone their search until they had more time. For many, the time of day of the search would occur in the evening as this was when they felt they had the most time, but also the time they felt most overwhelmed: “[*I search*] almost always at night because that’s when I’m alone, when I don’t have school, and when I’m not doing anything with my parents. That’s also usually when I have the weight of the entire day on my shoulders” [Interview 11].

3.2.2 Subtheme 2: Parents’ Perspectives of Mental Health Influence Searching

The influence of a parent’s perspective on mental health was brought up across most interviews—youth described that this perspective towards mental health influenced their search. Many youth described feeling that their parents were not familiar with what mental health is and that they would feel uncomfortable with their parents knowing that they were searching for mental health information online. These comments were often associated with searches in ‘incognito mode’ to hide the youth’s identity. For some youth, this disconnect from their family was described in relationship to a fear of how their parents might perceive them if they were aware of their searches for online mental health information: “*I don’t want [my parents] to know [about my searching]. I don’t want that to be a part of how they see me – so that’s another reason why I’d use an incognito tab*” [Interview 11]. To avoid this situation, some youth also described that they would lie to their parents about their searching history.

Youth with parents who were open to conversations about mental health, had faced their own mental health struggles, or normalized mental health conversations, were described as supportive, which made searching easier and more comfortable. Some youth described going to their parents with mental health questions and their parents providing answers, or if they didn’t have the answers, encouragement to search online: “*I would say that, especially with my family,*

because my parents have had different mental health challenges of their own in the past, it's definitely not something that is looked down upon as it might be with some other families. So, I definitely do feel comfortable talking, whether it be to them, or going online to find information” [Interview 8].

3.2.3 Subtheme 3: Information Learned in School Supports Youth's Searches

Many youth indicated that school taught them helpful knowledge and skills related to searching for mental health information online. Some youth were taught to look for URL's such as “.gov”, and citations and references when assessing the trustworthiness of online information. At school, youth described being shown specific search terms and online mental health information from credible organizations. Youth indicated that the tools and skills learned at school helped serve as a starting point when searching for mental health information for themselves and made the search easier: *“knowing specific terms to search up from my psychology class ... I knew exactly what to search up to get more specific help”* [Interview 2].

3.3 Theme 3: Key Attributes of Helpful Information

Three characteristics of helpful online mental health information were described across interviews including information that is easy to find and meets youth's needs, using language that is simple and clear, and information that provides next steps.

3.3.1 Subtheme 1: The Information is Easy to Find and Meets Youths' Needs

Helpful information is easy to find and addresses youth's needs by providing support in the format congruent to their mindset: helpful information provides emotional support when the youth is in an elevated emotional state, and informational support when the youth is in a

curious/learning mindset. When in an elevated emotional state, youth shared that they would search for “*ways to make myself feel better*” [Interview 11] and “*something that would help me feel less frustrated*” [Interview 5], which often was described in the format of videos and personal testimonies. When asked what was helpful when in a curious/learning mindset, a youth said, “*when I found exactly what I was looking for ... I found a list of symptoms for depression*” [Interview 12].

Youth indicated that “*easy access*” to this information is important and they “*don't want to have to search for a while to find the kind of stuff [they] need*” [Interview 6]. Finding information without a large effort is preferred by youth: “*As long as it's easy to read, easy to find, then it's helpful... If you search up what you're looking for, and then you click on a site and you don't have to scour the internet deeply to find it ... it's just kind of right there in front of you*” [Interview 2].

3.3.2 Subtheme 2: The Language is Simple and Clear

Youth described resources with simple language, accessible to most readers, “*made for the day-to-day reader,*” as helpful [Interview 14]. Specifically, youth talked about wanting to read resources at a language level that does not require them to search up word definitions to understand the information source. Oftentimes youth indicated that they would leave websites that were too “wordy” and that the language level could serve as a barrier to their understanding and were avoided. As one youth stated: “*The ideal website would have clear, concise, explanations of what's going on or recommendations of what to do, like the way that you would explain [it] to a five-year-old or someone that has no idea what you're [talking] about ... like really simple [language]*” [Interview 13].

3.3.3 Subtheme 3: The Information Provides Next Steps

Youth said that helpful information sources provided next steps. For youth in this study, “next steps” involved any online mental health information source that provided access to additional information sources or resources beyond the scope of the original information source. An example of a next step is a website providing links to other websites related to the youth’s primary concern: *“Say you go on [a] website, and you look through symptoms, [and you realize] “okay, that [piece of mental health information] sounds like this,” and then you can continue from there to get tips for that [piece of mental health information]. Then after the simple tips that you can [find and use] for yourself, if you're looking for other resources, [the website has] that - so it's kind of organized in steps of how you would want to go about [searching]”* [Interview 2].

One youth described next steps as “vital” [Interview 7], while some youth said that next steps can provide an avenue for continued searching and information sources more applicable to their concern than what they found in their original search. The flow of new resources that comes from a search can be helpful in finding the information that fits the youth’s needs best: *“A good article ... will almost always connect me to another person ... another author or another article to read”* [Interview 3].

3.4 Theme 4: Cues Affecting Trustworthiness of Online Information

Youth identified four characteristics of online mental health information sources that influenced their perceived trustworthiness. These subthemes are: links that appear at the top of the search results, the information’s design and format, the consistency of information across different sources, and the source of the information.

3.4.1 Subtheme 1: Links at the Top of the Search Results

Youth described that the order of the information source's website link appearing in a web browser's search results impacted their perception of the source's trustworthiness. Specifically, websites that show up first (i.e., near the top of the search results) were described as being trusted more than those that show up lower in the search results. For most youth, seeing links at the top of the search results indicated that others must be using those links too and therefore could be more trusted. One youth said that, *"if it's the first result, I might trust it more than if it was on the third page of Google"* [Interview 12]. The perceived quality of the information was also influenced by the position of the information in the search results. For example, a youth indicated that *"if it was the first to pop up then I was like, "well obviously that must be the best, it's the first link ""* [Interview 3]. Conversely, a few youth indicated that the links at the top of search results can be paid advertisements and are not necessarily what they are looking for. One youth described that seeing links at the top *"means they are more popular ... or they are advertised"* [Interview 9].

3.4.2 Subtheme 2: Information Design and Format

Youth described that the design and format of an information source can tell them very quickly if a source should be trusted. Clean, attractive, and well put-together online information sources were described as more trustworthy. *"For teens, a lot of them base their reliability off whether a website or YouTube video is appealing or if it's attracting to them"* [Interview 8]. Youth talked about how they are more likely to trust a website with a *"clean and professional"*

design as this indicates that the website is well-funded and more likely to be provided by a trustworthy organization [Interview 13].

Conversely, youth indicated that they did not trust online information that included advertisements, pop-ups, and typos. Websites with unorganized or “*clunky*” formats cued youth that a website was not trustworthy and that they should leave the website. A youth highlighted that “*if you see a webpage that's all clunky and isn't very good to look at ... and it just has a really badly look - I think that's what my biggest red flag is*” [Interview 9].

3.4.3 Subtheme 3: Consistency of Information Across Different Sources

In this study, youth concerned about the trustworthiness of information sources looked across websites to see if the information has been repeated elsewhere. Seeing information across information sources gave youth more confidence in appraising information as trustworthy. A youth described that, “*if you go to like five [websites], and they have almost the exact same information, I would say [it is] reliable*” [Interview 4]. When youth described looking online for strategies or techniques to support their mental health, there was greater perceived trustworthiness and confidence when implementing strategies that they had seen consistently across sources. Some youth looked for consistent information across sources when they searched to assess trustworthiness: “*I kind of go through [the search] like, "what information is the same between websites?" Because I feel like the more it shows up, the more you can believe it, versus the things that vary between each [information source]*” [Interview 14].

3.4.4 Subtheme 4: Source of the Information

The source of the information influenced youth's perceived trustworthiness. For youth in this study, "source" encompassed both who and where the online mental health information was from. Across interviews, a common factor contributing to the perceived trustworthiness of online mental health information was who the information was from, such as a mental health professional or physician (i.e., professional endorsement). Youth indicated that it, "*mattered a lot to see that [the information] was written by a doctor*" [Interview 3] and described feeling more confident reading information from a "*credible professional*" [Interview 1]. Youth described feeling more confident bringing the mental health information that they found online to their personal doctor if it was associated with a mental health professional or physician. "*If the author of the article doesn't have a "Dr." in front of it or it doesn't say PhD beside their name, then I don't trust it*" [Interview 10].

In terms of where the information was from—for example, social media, blog, or website—this also had implications for youth's perceived trustworthiness. There was a general distrust and caution towards mental health information on social media. Youth indicated that social media posts lack depth and there are no limitations to what individuals can post on social media, making the content hard to trust. Youth expressed greater trust in information from organizations and institutions that they are familiar with through personal experience, exposure to in school, or word of mouth: "*I was looking for institutions that I knew of, that I was told to trust or was taught to trust*" [Interview 3]. Further, youth described specifically searching for information from these organizations, returning to information from these organizations and institutions, and a willingness to "*look deeper into [the information] because [they] know and trust this organization*" [Interview 8].

Chapter 4: Discussion

The internet has become a prominent source of online mental health information for youth (36,82). However, the published literature demonstrates a knowledge gap in understanding how youth search for mental health information online. Studies have explored youth's online mental health help-seeking (2,9), but not specifically online mental health information searching. This study aimed to address this knowledge gap through the development of four main themes comprised of 15 subthemes to help understand youth's online mental health information searching. The four main themes were: (1) Mindset shapes the search process, (2) External factors shaping the search process, (3) Key attributes of helpful information, and (4) Cues affecting trustworthiness of online information. This study lays the foundation for understanding key elements of what youth think constitutes helpful online mental health information, elements that effect the perceived trustworthiness of this information, and two mindsets that influence how youth search. In this chapter, the results are framed within Rickwood and Thomas' Help Seeking Framework and practical implications for the creation of online mental health information sources for youth are discussed

4.1 Utilizing Rickwood and Thomas' Help-Seeking Framework

An online search for mental health information can be conceptualized as a form of "self-help" (19). However, limited research has specifically used these frameworks to conceptualize results on how youth search for mental health information online. While the present study took an inductive approach to thematic analysis where data drove the development of themes, Rickwood and Thomas' Help-Seeking Framework was used retrospectively to situate the results within this body of research (19). I used this framework to understand the type of resources or

support that youth in my study described seeking (i.e., informational, or emotional) as well as the influences they described when searching for information (i.e., elevated emotional state, curious/learning mindset, and available time).

4.2 Contextualizing and Examining How Youth's Mindsets Shapes the Search Process

Rickwood and Thomas' Help-Seeking Framework defines elements that "determine the initiation and progress" of searching for mental health information online as influences (19). Influences identified in this study included the *mindset* of the youth, their *available time*, and *information learned in school*.

The mindset of a youth represents an attitude towards searching which has been theorized to predict intentions, and therefore behavior (19). The relationship between attitudes, intentions, and behavior is described in the Theory of Planned Behavior; a well-known cognitive theory in the field of psychology (83). This relationship aligns with findings from this study, as participants described that their mindset influenced key behavioral elements of their search, such as prompting them to initiate a search, how the information sources were used post-search, and how the trustworthiness of information was perceived.

While three previous studies have been conducted about online information seeking and youth intentions, identifying and describing two mindsets is a novel finding of this study. A systematic review of 19 studies including those under 24 years old described what type of online mental health information youth looked for "during a difficult time," but did not address differences in preferences based on a youth's mindset (84). A Canadian study that surveyed 521 youth (17-24 years) about online mental health information seeking reported that most searched for information about symptoms (52%), with few looking for other types of information such as

personal testimonies, ways to cope, and other self-help strategies (2.5%) (84). Finally, a systematic narrative review of 28 studies on online mental health help-seeking for those under the age of 25 years was conducted by Pretorius et al., in 2019 (2). In this study, a common theme identified was that youth searched for symptoms and treatments for a mental health concern that they were currently facing (2,84) but again, did not assess the mindset of youth. The present study builds on the existing body of literature by describing differences in the type of format and support sought depending on the mindset of the youth.

The types of support sought in this study align with Rickwood and Thomas' Help-Seeking Framework (19). The categorization of social support in this framework can extend to the support provided through online mental health information. The online mental health information sought by youth was described as providing either emotional or informational support depending on the needs of youth. Youth in an elevated emotional state often described searching for information in the form of personal testimonies or experiences. This information provided emotional support by helping youth feel less alone. Youth in a curious/learning mindset described searching for information specific to mental health condition symptomology i.e., informational support. These findings suggest that youth's preferences for the type of support used are closely related to the mindset the youth was experiencing prior to and during their search.

Additionally, youth's descriptions of how mental health information was used differently post-search depending on their mindset was another novel finding of this study. Youth in an elevated emotional state described implementing the findings from the information sought as soon as it was found, while those in a curious/learning mindset described making a mental note of it, but not using it immediately. According to Rickwood and Thomas' Help-Seeking

Framework, how the information is used post-search could fall under the category of “outcomes” of help-seeking. The findings of this study represent a key difference in the outcome of mental health help-seeking depending on the mindset of the youth—youth may either utilize or note the mental health information found after a search depending on their mindset (19).

The influence of youth’s mindsets on evaluating the trustworthiness of information is another novel finding. Although the literature has described heuristics (i.e., mental shortcuts that aid in problem-solving and making quick judgements) youth use to assess the trustworthiness of online information, the influence of mindset on how youth assess trustworthiness has not been explored in this context (81). Because of the limited assessment of the trustworthiness of online mental health information while in an elevated emotional state, the findings from this study suggest it is important that trustworthy online mental health information is easily accessible and suggested by search algorithms to youth. When situated within Rickwood and Thomas’s Help-Seeking Framework, the results of this study suggest that researchers further investigate the relationships between attitudes (i.e., youth’s mindsets), help-seeking behaviors and information needs (19).

4.3 Understanding the External Factors Shaping the Search Process

This study identified three factors external to the searching process that influenced how youth search: Youth search when they have time, parent’s perspectives of mental health influenced searching, and information learned in school support’s youth’s searches. Youth that did not feel they had the time to search, described not initiating a search and waiting until they felt they had more time. Time constraints have previously been identified as a barrier to information-seeking in the literature (85). One known facilitator of online health-seeking for

youth is that online information allows for 24-hour access (9). However, it seems that this benefit may only be of relevance if youth perceive having the time to search. Youth in this study described that school and work may restrict when they will search, often resulting in them searching in the evenings.

Although, this study identified youth's parents' perspectives of mental health information as an external factor that influences searching within Rickwood and Thomas' Help-Seeking Framework, it is unclear if this would be defined as an "influence" according to the framework: Youth did not describe this variable as "determin[ing] the initiation and progress" of searching (19). However, youth did describe that their parents' perspectives towards mental health influenced the measures youth took to ensure anonymity when searching (i.e., searching in incognito mode). Ensuring anonymity was described in relationship with a fear of what youth's parents might think of their searching for information on this topic, suggesting that perceived stigma around mental health may be a factor influencing the search.

In a systematic review of 144 studies, stigma was ranked as the fourth highest barrier to mental health help-seeking, having a moderate to negative effect on this behavior (26). It was identified that youth and ethnic minorities are disproportionately affected by stigma than other demographics (26). Given that the youth in the current study were disproportionately of Asian ethnicity, it is possible that feelings of stigma were elevated for those in this sample, in which parent's perspectives were identified as a factor that may add to youth's perceived stigma around searching.

The results of the current study also suggest that what youth learn in school about searching for and assessing the trustworthiness of online health information is important in shaping how youth search for mental health information online. In alignment with the Help-

seeking Framework, what was learned in school was described as a factor that “determines the progress” of searching (19). Specifically, what was learned in school had implications for the search terms youth used and how the trustworthiness of this information was perceived and assessed. These findings have implications for youth education and highlight the importance of mental health literacy (see section 4.6.1 Youth Education).

4.4 Contextualizing and Examining Key Attributes of Helpful Information

Understanding what elements of online mental health information are helpful for youth is critical in developing information that meets youth’s needs. In this study, youth emphasized three elements of what was considered helpful information: 1) information is easy to find and meets their needs, 2) the language is simple and clear, and 3) the information provides next steps.

In this study, information that met the needs of youth was also considered by youth to be accessible and easy to find. These findings have also been reported in an interview study that engaged 80 youth—findings included that the type of mental health concern youth were experiencing influenced the type of mental health information that was sought (e.g., information on how to manage symptoms of a mental health disorder, what causes symptoms, etc.) (33).

The accessibility of online mental health information has been noted across studies as a benefit of online mental health help-seeking compared to other in-person help-seeking modalities due to barriers like distance, cost, and wait lists (9,86). Although online mental health information is broadly considered more accessible than other information sources, this does not mean that the information that youth need or want is easy to find. Accessing links that show up at the top of the search results has been shown to be one way that youth are able to access online health information in a timely manner (37); however, this search strategy does not always result

in what youth are looking for. When creating helpful online mental health information for youth, taking steps to ensure search engine optimization and representation in the top suggested links may increase youth's accessibility to and benefit from this information. Others have suggested that information sources that appear at the top of the search results have greater perceived trustworthiness among youth (9).

The importance of using accessible and clear language in online health information is widely reported in the literature and suggested by the results of this study. In 2018, a systematic review by Park et al. reviewed 19 studies and found that helpful online health information for youth has good readability (37). In contrast, a more recent systematic review of 69 Australian health websites available to youth, found that the readability of most websites was at a university student level, with few webpages being specifically tailored for youth (87). Although the review by Park et al. was only inclusive to Australian-based websites, this trend may be consistent with the characteristics of online mental health information accessible to Canadian youth. In a readability analysis of online mental health information conducted in North America in 2019, the reading level of information was reported at far above the recommended 6th-8th grade reading level recommended by national health organizations (88). The mean reading level of the online mental health information was a 13 (standard deviation =2.9) (88). The findings of this study in conjunction with other research in this area suggest that online health information should be written in clear and simple language, accessible to youth.

An important finding of the current study was that youth need mental health information that provides next steps. Further, the results suggest that online mental health information should go beyond educating youth and include additional links and resources to connect youth with further information and support as desired. In a systematic narrative review by Pretorius et al., it

was suggested that online mental health help-seeking can “act as a gateway behavior to further help-seeking” (2). Accessing online mental health information can educate youth as to what further steps may be appropriate such as reaching out to a mental health professional (2). Online mental health information helps develop youth’s mental health literacy and understanding of when to seek care. These findings are consistent with the results of a recent systematic environmental scan of the online anxiety resources available to Canadian youth conducted in 2020 (89). Youth consulted about currently available anxiety resources described the importance of “next steps,” such as links to access mental health professionals, personal stories, and more information about their condition. If online mental health information is to be helpful to youth, including next steps in the development of this information is important.

4.5 Contextualizing the Cues Affecting Trustworthiness of Online Information

Presently, there is little awareness of the variable quality and reliability of online health information. In 2020, Battineni et al. conducted a cross-sectional literature review of papers that addressed how internet users assess the quality and reliability of online health information, observing that there is limited awareness of the quality of this information (90). Despite information quality concerns, youth participants in the present study described the use of some critical appraisal skills and specific cues to support their assessment of the trustworthiness of online mental health information (i.e., acknowledging professional endorsement, organizational endorsement, and the websites’ URL). Heuristics used included looking at the structure of the websites’ address (i.e., URL’s containing .edu, .org, or .gov are considered more trustworthy), cross-checking online information sources, and the authority of the website’s authors and organization (81).

These findings are similar to those reported in 2020 by Freeman et al., who examined the role of trust for youth aged 13-18 years when searching for health information online (81). Similarly, they found that youth use heuristics to appraise the trustworthiness of online health information (81). These findings are further confirmed by a study that engaged 157 youth aged 11-19 and aimed to understand youth's perceptions and experiences using the internet to find health information (36). The authors reported that the URL .edu represents a website provided by a credible institution (36), amongst others (37).

Comparable to the current literature (9,36,81), youth in the present study described cross-checking information across websites (where consistency positively impacted their perceived trustworthiness of information), and the use of citations and references was an important cue which impacted the perceived trustworthiness of online information. In a cross-sectional survey study of 1308 participants aged 18-25 years by Pretorius et al., it was identified that youth use the consistency of online mental health information across websites as an important marker of trustworthiness (9). Further, Pretorius et al. reported that 80% of survey respondents indicated that references to an author or scientific data served as a key indicator of the credibility of online mental health information (9).

Youth also reported that key elements of the design and format of information provided cues to help them understand the trustworthiness of online mental health information. Specifically, youth in the current study indicated that online information with URL's ending in .gov, providing citations and references, and having a "*clean and professional looking*" format [Interview 13], increased their perceived trustworthiness. Other studies have also described the importance of the 'initial impression' made by online health information through its design, as this may effect youth's perceived trustworthiness (37,91).

Youth in the present study acknowledged that the source of the online information was an important indicator of information trustworthiness with both the credentials of the author (i.e., PhD, MD) and the source type (i.e., website, social media) being important. These findings align with results from two studies—in the first study, one website characteristic alone was not a reliable indicator of the quality of a website (14), while in the second study, websites from reputable organizations and by authors with expertise in the domain of the online health information are more trusted by youth compared to information provided on social media (81). Likewise, in a 2019 systematic narrative review by Pretorius et al., it was found that youth value online information and services from mental health professionals (2). In a study which surveyed 321 youth about their online mental health experiences and expectations, only 10% said that they would use social media to get help for concerns like anxiety and depression (84). These findings, along with those from the present study, suggest that the need for which a youth is searching the internet may have implications for what is considered an appropriate information source by the youth.

4.6 Implications for Practice

This study's findings have practical implications related to youth education and the creation of helpful online mental health information. This section describes what the results suggest for possible modifications to the current education curriculum for youth, what should be considered in the development of online mental health information for youth, and how the results may enhance knowledge translation efforts related to mental health supports for youth.

4.6.1 Youth Education

Presently, online mental health information is variable in quality. To mediate the use of poor quality online health information, it has been suggested that appropriate education programs for those searching is of relevance (90). Some youth in this study demonstrated techniques for assessing the trustworthiness of information; however, this finding was not ubiquitous across study participants. Education programs can take many forms to support youth in developing online search skills and knowledge of how to critically appraise online information. Enhanced mental health literacy has been shown to improve and facilitate online mental health help-seeking and information searching (20). Further, a systematic review of eight studies which evaluated school-based interventions to enhance youth's critical appraisal skills of health claims described positive short-term outcomes (92). As youth continue to use the internet as an accessible source for mental health information, it is important that school education teaches critical analysis skills aligned with searching for mental health information online.

4.6.2 Creating Helpful Online Mental Health Information for Effective Knowledge Translation

Findings from this study can inform the creation of online mental health information sources tailored for youth. In this study, youth desired online mental health information that used clear language, was easily accessible, and provided next steps. An inappropriately high language level has been identified as a weakness of current online health information (87,88). Writing online information with clear and accessible language will support effective knowledge translation of mental health information to youth. Moreover, increased accessibility of high-quality online mental health information may be enhanced by the optimization of search engine results, such that information from reliable sources and organizations are presented as top links. Search engine optimization of this information may be a consideration of those creating online

mental health information but should be extended to those designing search engine algorithms. Further, online mental health information sources that provide next steps in the form of contact information for mental health professionals may facilitate youth's access to these services.

Preferences for the format of online mental health information changes depending on the mindset of a youth (i.e., in an elevated emotional state or curious/learning mindset). Youth in an elevated emotional state may struggle to read a text-based website and prefer to access mental health information and support in a video format. For those designing online mental health information, considering the mindset of the intended audience, and designing information sources accordingly may lead to greater uptake and benefit to youth. Because effective knowledge translation involves stakeholder engagement (93), collaboration between researchers and youth may lead to the development of resources better suited to youth's needs.

4.7 Strengths and Limitations

This study contributes to the existing literature on youth's online mental health information-searching experiences and information needs. Including youth partners at each stage of this project, with approach and methods informed by the McCain Model of Youth Engagement, provided enhanced youth-friendliness to the study materials and manuscript, and meaningful input from youth perspectives throughout data analysis (see Chapter 6: A Reflection on Youth Partnership for more information on the benefits of youth partnership) (40). Guidance was also provided from the Youth Engagement Guidebook for Researchers to plan, implement, and reflect on youth partnership (40,41). Youth study participants provided detailed accounts of their personal experiences searching for mental health information online. Some youth described searching for mental health information from both mindsets identified in this study (i.e., elevated

emotional state and curious/learning mindset) and were able to compare key characteristics of how they searched in each of these states. Further, this study was strengthened by the guidance of a methodological model for rigor in qualitative studies (78) and reporting according to the standards for reporting qualitative research checklist (59).

However, this study is not without its limitations. The homogeneity of the study sample posed some limitations to the transferability of the results. Throughout data collection, steps were taken to try to recruit a diverse sample: as the study progressed, those who were not well-represented in the earlier sample (i.e., those 20-24 years and male) were preferentially recruited and enrolled. However, the majority of study participants identified as female, and as such the male voice and the voices of those who identify across the gender spectrum (e.g., transgender, non-binary, gender fluid) were not well-represented in this study.

In mental health research, young men have been traditionally underrepresented which has negative implications for the applicability of study's findings and the development of mental health resources suited for this population (94). This could be due to the reality that young men feel elevated personal stigma towards mental health help-seeking and participate in less help-seeking behaviors compared to other demographics (95,96). These effects could be further enhanced by the sensitive nature of the study's topic (97). Without experience searching for mental health information online, male youth would not meet the eligibility requirements for participation in this study.

A noteworthy limitation of this study is the lack of gender diversity amongst this study's sample. Youth that identify outside of gender binary constructs (i.e., man or woman) were not represented in this study. Higher rates of mental health concerns have been identified amongst this population (98–100) which may be related to higher levels of stigma and discrimination

directed towards transgender and gender-diverse youth (98). It is anticipated that representation of gender diversity in this study may have led to results supporting a more holistic view of how youth are searching for mental health information online. This limitation reflects the mental health literature as transgender and gender diverse people are often underrepresented in research and their unique needs need to be considered in future research and practice (101,102).

A large percentage of study participants were of Asian ethnicity (57%). Asia has been the largest location of immigration to Canada in recent years and represents 18% of Canada's population (103). Of the provinces from which participants were recruited from (i.e., Alberta and Ontario), a higher percentage of the population is of Asian descent: 19% and 23%, respectively (103). Although this Canadian demographic information does not fully account for the high representation of participants from Asian ethnicity, those of Asian ethnicity often experience greater cultural stigma towards mental health, are less likely to seek in-person mental health care, and prefer self-help methods (22). Subsequently, this may account for the disproportionate engagement of participants of Asian ethnicity in this study.

Although the study sought to engage youth across Canada, study participants were primarily from Alberta (71%) and Ontario (29%). The main Canadian youth research groups which supported our study recruitment were based in Alberta and Ontario and word of mouth from previous participants resulted in further recruitment from these provinces, potentially explaining why participants were recruited from these provinces. An intrinsic limitation of qualitative study recruitment is that effective strategies for recruitment (i.e., collaborating with community gatekeepers trusted by youth participants and using word of mouth by participant's and community gatekeepers) may lead to subsequent recruitment that is more homogenous to the previously recruited participants (97). As the study progressed, this challenge was addressed by

purposive sampling and reaching out to other national research groups to advertise this study to their youth networks, however this did not result in recruitment of participants from other provinces.

Using Rickwood and Thomas' Help-Seeking Framework to conceptualize the results of this study has strengths and weaknesses. As this study only investigated a sub-set of the broader topic of help-seeking for mental health problems, this framework could not provide specific conceptualization to help-seeking restricted to the medium of an online search: there were many elements of this study that could not be described according to this framework. However, it is anticipated that research in this field will continue to grow and defining terms according to this framework may allow for the cross-validation of findings across similar studies.

4.8 Implications for Future Research

This study offers several future research directions. First, conceptual models unspecific to this research topic can be loosely applied but allow for limited comparison and validation of findings across studies: Rickwood and Thomas' Help-Seeking Framework supported a limited comparison of the results of the current study. Use of a model specific to online help-seeking would have allowed for pattern identification across studies and cross-validation of results. It has been suggested that Rickwood and Thomas' Help-Seeking Framework may serve as a starting point for the development of such a model (2,96). The results of this study are described in relation to the Help-Seeking Framework so that they may help inform the development of a conceptual model in this domain (2).

Secondly, this study has identified multiple factors that can influence how youth search for mental health information online—youth's mindset, available time, parent's perspectives on

mental health, and information that has been learned in school. However, the literature suggests that understanding the influence and strength of these orientations/attitudes on searching behavior needs to be understood (19). It is expected that studies addressing the strength of these influences would address this gap in the literature and provide background to creating a conceptual model in this domain.

Thirdly, when youth partners are engaged and their perspectives are valued, they can provide important and valuable input into research projects (40). Engaging youth partners throughout this project had multiple strengths, including enhancing the youth-friendliness of the study materials, and bringing a youth perspective to the data analysis stage of this project. Those conducting research on youth mental health may continue to benefit by engaging youth in future projects.

Finally, the findings of this study may inform future knowledge translation initiatives in this domain. Specifically, study findings about what online information is perceived as trustworthy and helpful may be integrated into knowledge translation efforts for online mental health information for youth. Given that partnerships between researchers and stakeholders have been shown to improve the uptake and use of research (93), it is anticipated that the results of this study may be of greater relevance to knowledge translation efforts in this field.

Chapter 5: Conclusion

The aim of this project was to understand how youth search for mental health information online. This project took a qualitative descriptive approach, with undertones of community based participatory research demonstrated through youth partnership. Fourteen youth participants were engaged in semi-structured individual interviews online. Through inductive thematic analysis, four main themes comprised of 15 subthemes were developed. The four main themes were: (1) Mindset shapes the search process, (2) External factors shaping the search process, (3) Key attributes of helpful information, and (4) Cues affecting trustworthiness of online information.

Although this study took an inductive approach to data analysis, relevant findings were retrospectively conceptualized according to Rickwood and Thomas' Help-Seeking Framework. Specifically, there was some conceptualization of the influence of attitudes (i.e., participant's mindset) on the search process, the type of support sought, the influence of what has been learned in school on the searching process, and youth's available time. A novel finding of this study is that youth have different search strategies depending on their mindset when searching. This finding has not been reported previously in the literature and has implications for the design of online resources that meet the needs of youth.

The findings from this study indicate that youth search for and need helpful online mental health information. Youth identified that helpful information is that which is easy to find, meets their needs, has a simple and clear language, and provides next steps. The literature has identified the accessibility of language to be important to youth's online searches. The results of this study support the recommendation of national health organizations that online resources available to youth be written according to the recommended 6th-8th grade reading level. Further, the importance of online information providing next steps post-search (e.g., links to additional

websites, the contact information for mental health professionals) has been identified in the literature and has been confirmed by the results of this study.

This study identified cues that affect youth's perceived trustworthiness of online mental health information. These heuristics have significant overlap with the literature on how youth assess the trustworthiness of online information; youth assess URL's (e.g. .gov, .edu), cross-check information across sources, look for citations and references, and look at the credentials of the author or organization providing the information.

This study also identified multiple elements external to the search process that influence how youth search. Specifically, information learned in school had an impact on how youth constructed searches and how comfortable they felt about searching. Conversely, youth's parents' perspectives towards mental health could have adverse or beneficial effects on elements of how youth conducted a search. Additionally, youth's available time was identified as an external factor to the search which impacted when youth would initiate a search: this study found that lack of time dissuaded youth from initiating searches, opting to wait until they had more perceived available time.

The results of this study have important implications for youth education and the creation of online mental health information that is helpful for youth. The findings of this study suggest that effective knowledge translation of mental health information to youth may be enhanced by implementing elements of "helpful information" as described in this study. Specifically, this information should be easily accessible, use simple and clear language, and provide next steps. Search engine optimization may increase the accessibility of helpful online mental health information for youth. As youth in this study relied on heuristics learned in school to guide searching, it is important that school education teaches searching and critical analysis skills

aligned with searching for mental health information online. It is anticipated that bolstering mental health literacy will lead to increased uptake of helpful mental health information for youth.

Limitations of this study include factors of homogeneity in the study sample and the limited conceptualization of the results according to Rickwood and Thomas' Help-Seeking Framework. Strengths of this study include the engagement of youth partners at each stage of this project, strict adherence to methodological models for rigor, and the detailed personal accounts of the study participants.

This study offers several future research directions: Firstly, the limited conceptualization of the results of this study according to Rickwood and Thomas' Help-Seeking Framework demonstrated the lack of a conceptual model more specific to this field. The results of this study may help inform the development of a conceptual model for online mental health information searching or the modification of existing frameworks to better address information searching in this field. Secondly, it has been suggested by both the literature and this study that the relationship between attitudes (i.e., youth's mindset) and behavior (i.e., searching for online mental health information) should be investigated further. Thirdly, this study points to the added benefit of engaging youth partners in future qualitative research projects.

Elements of community-based participatory research methodology were demonstrated through the engagement of youth partners at each stage of this project. Although youth partners were not study participants, they provided novel input and insight at key stages of this project including but not limited to; study design, creation of recruitment materials, code and theme development, and writing up the results. Youth partnership was a significant strength of this

project: youth partners provided valuable input and insight at all stages of the project, were valued key-decision-makers, and developed project deliverables.

Chapter 6: A Reflection on Youth Partnership

6.1 Summary of Youth Engagement

The study described in this thesis benefited from the engagement of youth partners. This process was guided by the Innovate Youth Engagement Guidebook for Researchers, McCain Model for Youth Engagement, and current literature on engaging youth in qualitative research (39–41).

Created by some of the most prominent researchers in the current youth engagement literature, The Innovate Youth Engagement Guidebook for Researchers provided practical guidance for youth engagement throughout this study including valuable definitions for the types of youth engagement used, an outline of how youth can contribute to a project, how to build strong partnerships with youth, and guidance for reflection with the youth partners at the end of meetings and at the end of the project (41). Within the guidebook, the McCain Model is highlighted as a flexible framework for promoting and understanding youth engagement.

The McCain Model of Youth Engagement was a valuable conceptual framework for guiding the engagement of youth in this project (39). The model provided insight on the number of youth to be engaged for this project; given the high level of engagement, engaging fewer youth was more desirable (39). This model also provided information on how to support youth partners in authentic decision-making and informed me in emphasizing the importance of flexibility, mutual respect, mentorship, and reciprocal learning with youth partners (39). Because this study involved engagement of youth partners in mental health research, it was desirable to use a model specific to youth that had been implemented in other academic projects on mental health topics (39,70).

Throughout this project, youth partners were involved virtually throughout the research study to inform key elements of the study design (e.g., interview guide development and pilot testing, recruitment strategies, etc.), interpret the results (e.g., support the development of themes, develop theme names), and prepare a manuscript for this study. Youth partners were engaged through six compensated Zoom meetings, two additional optional meetings, and email correspondence. I initiated timely communication (i.e., email updates once a month) to periodically check in on youth partner's support needs and provide project updates. After each meeting, I debriefed with youth partners where youth partners were asked questions to improve future meetings according to the questions provided in the Youth Engagement Guidebook for Researchers (see Appendix H) (41).

Aligning with SPOR Evidence Alliance guidelines for patient partner compensation (104), youth partners were compensated with a \$25 gift card for each one-hour compensated meeting attended and up to two hours reviewing the final manuscript. In April 2022, all youth partners were engaged in an optional one-on-one virtual chat with myself to reflect on their involvement in the study, if their engagement was meaningful to them, and to provide feedback.

6.2 Initiating Youth Partnership

In April 2021, youth partners were identified from Canadian youth research organizations with which the research team had previous relationships (e.g., Edmonton Youth Council and KidsCAN). Interested youth were invited to an orientation meeting where I described the planned scope of youth partnership, the anticipated time commitment, and the opportunity for authorship on the final manuscript for this project. It was detailed that authorship on the manuscript would require an additional time commitment beyond the plan for youth partnership

to meet the International Committee of Medical Journal Editors' (ICMJE) four criteria for authorship (105). All youth that attended the orientation meeting emailed me indicating that they would like to commit to youth partnership for the duration of the project and the additional commitment required for authorship on the final manuscript. Three Canadian youth partners representing different ages were recruited. Youth partners were included as members of the study team on the ethics application for this project and were not considered study participants.

6.3 Youth Partner Involvement at Key Stages of the Project

6.3.1 Stage 1: Study Design and Protocol Development

From the onset of this project, youth partners were engaged in key elements of the study design and protocol development. Youth partners provided their input on whether focus groups or individual interviews would be more appropriate for youth participants addressing the sensitive topic of this research question. Further, youth partners were engaged in meetings to provide their input and feedback on study materials. Specifically, youth partners reviewed the Study Information Sheet and Consent Form (see Appendix A), Demographic Question Guide (see Appendix B), and the Interview Guide (see Appendix C). To improve the youth-friendliness of these materials, youth partners provided input on the wording of the study materials, edited sentences that seemed unclear, and helped order the questions of the Interview Guide. The Interview Guide was pilot tested with two of the youth partners leading to further modifications to enhance clarity. Two youth partners took the initiative to design recruitment materials (i.e., social media posts) under my guidance. The social media posts were reviewed by all youth partners and the study's research team before being submitted for ethics approval. Youth partners

supported recruitment by sharing recruitment materials with the youth research groups with which they had previous connections.

6.3.2 Stage 2: Data Generation and Analysis

Throughout this project, meetings were held where youth partners could provide insight to the results and support the interpretation of the findings through a youth lens. As early coding began, preliminary codes were developed. Youth partners indicated which of the preliminary codes were reflective of their personal experiences with searching for online mental health information. As interviews progressed and theme development continued, youth partners supported the identification of questions to add to the Interview Guide as more specific lines of questioning became relevant. Specifically, youth partners emphasized that it was important to ask about what influence school has had on how youth search. They also asked that the preliminary code, “youth want next steps,” to be explored in greater depth. Additionally, youth partners added a line of questioning to clarify what about an online mental health information source makes youth want to revisit it: the findings from this line of questioning helped inform the development of Theme 3: Key Attributes of Helpful Information. Youth partners also highlighted connections between preliminary themes and identified questions to explore during analysis. Specifically, youth partners identified that it is important to know what different motivations can prompt a search and wanted me to further explore “why youth are searching.” This input aided the identification of the two mindsets youth may search from and how that impacts a search at various stages. Finally, youth partners highlighted which themes they considered to be most relevant to the main research questions, were most depictive of their experiences searching for mental health information online, and should be included in the results.

6.3.3 Stage 3: Writing the Results and Dissemination

Youth partners were involved throughout the write up of the study's results. To enhance clarity, each youth partner spent 2-3 hours reviewing and editing the names of the study's themes and subthemes. Youth partners reviewed and edited each section of the manuscript through email correspondence. Prior to writing the discussion section, youth helped generate discussion points of relevance to this project. One meeting was conducted after the manuscript was near completion to review the manuscript as a group and make any additional changes before submission for publication. It is planned that youth partners will be consulted on dissemination strategies and invited to support the presentation of the findings. Youth Partners will be asked to read and provide thoughts and feedback on dissemination materials (e.g., manuscript, presentations, posters, lay-friendly summaries).

6.3.4 Stage 4: Wrap-up

Near the end of the project, youth partners were invited to engage in one-on-one discussions to reflect on their involvement in the project. While no formal evaluation was conducted, youth were asked to describe their experiences as youth partners on a research project. Youth partners were asked if their engagement was meaningful to them, what changes could have been made to improve their experience and ability to contribute, their thoughts on how they saw their input implemented throughout the project, and general thoughts on their engagement. Additionally, youth partners were provided the opportunity to write a short reflection piece on their experience as a youth partner on this project. Impressions from these discussions and youths' written reflections are included in section 5.5 The Youth's Perspective of Youth Partnership.

6.4 The Researcher's Perspectives: Benefits and Challenges of Youth Partnership

In this section I will be reflecting on questions posed for researchers in the Innovate Youth Engagement Guidebook for Researchers (41) (see Appendix H). The benefits and challenges I experienced in engaging youth partners are summarized in Table 4. The main benefits of engaging three youth partners throughout the scope of this project were trifold. First, consistently engaging youth partners with personal experience searching for mental health information online throughout this project was incredibly valuable to me, as it offered a more nuanced and insightful approach to this project's research question. Youth were able to highlight findings that resonated with their personal experiences searching for mental health information online. Secondly, youth were engaged early and were able to provide input on key decision-making during study design (i.e., focus groups vs. individual interviews, participant compensation) and readily provide feedback on the clarity of the language used in study materials (i.e., Interview Guide, Demographic Question Guide, Information Sheet and Consent Form (see Appendices A, B, and C)), enhancing the youth-friendliness of this project. Youth provided input on the organization of codes and themes, theme naming, and edited the final manuscript. All youth feedback was implemented throughout the study unless input was deemed to be outside the scope of the study question. Thirdly, youth partners were able to independently develop deliverables, such as creating the recruitment materials for this project (see Appendix F).

Engaging youth partners was not without challenges. Highlighted in my reflective journaling, it was a concern that although the youth partners were not study participants, the personal experiences of the youth study participants that overlapped with those of youth partners may be emphasized in the study's results. Factors mediating this influence included consulting

the research team on theme development and organization, and reviewing the relevance of developing themes to the core research question with youth partners.

Although youth partners could easily contribute to many areas of this study, there were areas that were challenging to engage youth partners. Specifically, throughout data coding, youth partners were able to support the organization of codes, development of themes, and theme naming, but were not able to actively develop codes from the level of the raw data. These limitations were due logistical and financial barriers in addition to the youth partners not being trained researchers. Youth partners were listed as members of the study team on the ethics application for this project, but logistical barriers existed in providing youth access to the secure drive where data was stored and the software where data analysis occurred. Further, appropriately compensating youth for the additional support of coding raw data was outside the budget for this project.

Engaging youth partners was not without financial investment. Fortunately, our research group had sufficient funding to engage youth partners at key stages of this project. Planning for the anticipated and unanticipated costs of engaging youth partners prior to beginning the project and consulting current guidelines for the appropriate compensation of project partners were strengths of this project (106).

In summary, engaging youth partners provided incredible value to this project and was marked by many strengths and a few notable weaknesses. By engaging youth partners in this project, I felt even less like a researcher looking in on the experiences of participants, but more like an insider, sitting at the table with those who shared lived experience with this topic of interest.

Table 3. Summary of the Benefits and Challenges of Youth Partnership

Benefits	Challenges
Youth partners provide valuable and insightful input at all stages of the project, true to the experience of youth	Maintaining a balance between implementing the feedback of youth partners and ensuring data analysis was true to the experience of youth participants
Youth partners were key-decision makers during study design and enhanced the youth-friendliness of project materials (e.g., recruitment materials)	Parts of the study were more complicated to engage youth partners (i.e., preliminary coding from the raw data)
Youth partners helped develop project end-products (e.g., manuscript development)	Financial compensation should be a major consideration of all studies considering engaging youth partners

6.5 The Youth's Perspective of Youth Partnership

This section is written from my impressions during the wrap-up meetings with the youth partners and regular check-ins throughout this project. Topics and questions discussed in the one-on-one meetings drew inspiration from the Patient Engagement In Research Scale (PEIRS), the Youth Engagement Guidebook for Researchers, and the Public and Patient Engagement and Evaluation Tool (PPEET) (41,107,108). The topics and questions considered for discussion are included in Appendix I; however, youth partners had the opportunity to discuss what they felt was important. A summary of youth partners' thoughts on youth partnership is included in Table 5.

Youth partners described that being involved in this project from start to finish was a very fulfilling and unique experience. All youth partners felt that their input was listened to and acted upon. By receiving updated versions of the manuscript with their changes highlighted and implemented, youth partners felt that their input was valued. For youth partners that had previous experience in research, this project offered the novel experience of seeing a project through all stages from planning and protocol development through to manuscript preparation. All youth partners felt that they could share their thoughts freely and without judgement which was partially attributed to the friendly environment fostered at the onset of the project and the appropriate size of the research group. Timely communication (i.e., email updates once a month) and periodically checking into youth partner's support needs, was appreciated by all youth partners.

Through engagement in this project, youth partners described developing skills and gaining experience in qualitative research. Specifically, youth partners talked about developing an understanding of participant recruitment, thematic analysis, and the process of writing a

manuscript. Developing stronger collaboration, critical analysis, and teamwork skills were described as positive outcomes of this experience. Engagement in this project was considered a “low-stakes” opportunity to explore and consider research as a potential career. For one youth partner, the qualitative research experience gained in this project allowed them to take on new part-time research employment. For others, being engaged as a youth partner allowed them to develop a passion for research and consider a career in academia from a more informed perspective.

When asked about improvements that could have been made in engaging youth in this project, there were few suggestions. Youth partners felt that they were able to be engaged easily at all stages of the project. Youth partner’s suggestions for future qualitative research projects engaging youth partners included hosting in-person meetings when possible and engaging youth partners in coding the raw data. Youth partners said that being involved in this project was fulfilling as the topic of youth mental health was personal and important to them. All youth partners indicated that they would be happy to be involved in a project like this one again.

Table 4. Summary of Youth Partner’s Thoughts on Youth Partnership

Positive Factors	Improvement Factors
<ul style="list-style-type: none">• Viewed as a positive and fulfilling experience• Felt listened to and input was valued and implemented• Could speak freely and without judgement• Timely communication• Developing skills specific to qualitative research but also those relevant to any project involving teamwork• Allowed for a low-stakes exploration of a career in research	<ul style="list-style-type: none">• In-person meetings when appropriate• Involving youth in the preliminary coding of raw data

6.5.1 Youth Reflection 1

“Throughout my involvement in this project, I’ve had the opportunity to expand my skills, work alongside other youth researchers, and meaningfully contribute to research on youth mental health. As a youth partner, the feedback I gave was always listened to and applied to the work at hand, whenever it was appropriate. I feel a great sense of pride towards my contributions to this project. I believe I was able to guide our lines of questioning and refine our data analysis in a way that better reflected the needs of youth, which I think is super valuable! My involvement felt incredibly authentic, and my ideas and suggestions were given equal weight to those of my co-researchers. Overall, this project and my work on it went above and beyond what I could have ever expected, and it’s been an invaluable experience. I’m excited to see the final stages of this research come together, and I feel confident that my contributions will have helped us get there.” – Youth Partner

6.5.2 Youth Reflection 2

“Involvement of youth as research partners is not only beneficial for the research project but also allows for an opportunity to increase capacity within communities which may be underserved or underrepresented. Providing an opportunity for new experiences through which I was able to learn valuable research skills that I can apply to my own academic and professional life, engagement of youth as research partners provides a sustainable opportunity to bridge the gap between academia and community.

The opportunity to take part in research that mattered to me, and feel as if my contributions were valued, has sparked a great deal of interest in academic research and its contribution to society. It is critical to approach youth involvement through partnership to avoid tokenistic engagement and ensure that there is an accurate representation of youth perspective. Valuing youth voice in youth-related research opens doors for new dialogue and discussion which accounts for the discrepancies that may have otherwise gone ignored or understated. Involved throughout the entirety of the research project, we had the opportunity to contribute our skills and feel like valued members of the research team, but also engage in activities that helped develop new skills. It was also very important to approach youth partnership through long-term active engagement to facilitate valuable contribution from the youth.” - Youth Partner

6.5.3 Youth Reflection 3

“It has been an incredible privilege to have been a youth partner on this project. There are two main takeaways that I have from this experience: (1) a greater understanding of how advocating for social change should empower the groups who are the focus of the advocacy and, (2) a greater understanding of qualitative research. Being involved as a youth partner on a research study focused on youth issues made me feel valued and made me feel like my experiences were heard. This has taught me a lot about the nature of advocacy work that I will be able to translate into my future as I continue to advocate for others. Secondly, I have gained a greater appreciation for the nature of qualitative research work. A lot of my experience has been focused on quantitative research but being exposed to this new area and type of research has shown me that research is diverse and encompasses so much more than numbers and statistics.

My experience both met and exceeded my expectations; I had the privilege to get far more involved than I originally expected, and I am grateful for this opportunity. In line with how this experience surpassed my expectations, I felt that my contributions were very well reflected in this project. Specifically, I always felt heard, and I was always able to have the confidence that my ideas, perspectives, and thoughts were being acknowledged and considered. I feel like my role has been valuable in the project. I think that I have had the opportunity to offer a lot of insight and thought into all stages of the project and being a youth partner has really allowed this study to be unique in how it engaged youth throughout its progress.” – Youth Partner

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<http://www.chile.bmw-motorrad.cl/sync/showroom/lam/es/>

Appendices

Appendix A: Participant Information Sheet and Consent Form

INFORMATION SHEET AND CONSENT FORM (Project Number: Pro00109735)

Title of Research Project: Understanding the Online Mental Health Information-Searching of Youth: A Qualitative Descriptive Study

Principal Investigator: Megan Pohl, BSc University of Alberta Phone: 780-492-6124 Email: pohl@ualberta.ca	Faculty Supervisor: Lisa Hartling, PhD University of Alberta Phone: 780-492-6124 Email: hartling@ualberta.ca	Study Coordinator: Sarah Elliott, PhD University of Alberta Phone: 780-492-6124 Email: se2@ualberta.ca
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What is this study about?

Canadian youth want to know more about their mental health. The specific process that youth undergo as they search for mental health resources online is not understood. We aim to understand how youth look for mental health information online. Specifically, we are interested in understanding what forms of information youth are seeking, their preferences, and their perceptions of what is helpful and trustworthy.

What will we ask you to do?

If you agree to participate in our study, we would like to have a conversation with you about how you search for mental health information online. This will take place in a virtual one-on-one interview through the Zoom platform. During the virtual interview you will be asked to share about your experiences searching for this information. You will also be asked what information has been helpful and what types of information you perceive as trustworthy. Before the

interview, we will send you a short survey. The anonymous survey will ask about your age at the time of the study, city/town/community of residence, gender, ethnicity, education level, presence of siblings, and rural or urban residence.

Please note that we are required by law to disclose to authorities any information about child abuse that is discovered over the course of the study. If we come to learn that you are in danger of hurting yourself or others, we will have to report to emergency services (911).

What will happen to the information I provide?

The information from your interview will be used for the research project described above. Your demographic information will be used to describe the group. Audio recordings of your interview (via Zoom) will be stored securely on the University of Alberta's network drive, and typed up into a written document. This information will only be accessible to the researchers working on this study. Your data could be subject to the US Patriot Act, and your participation means a recording of your interview will be stored and accessed in the USA.

To protect your privacy and confidentiality, all identifiable information will be removed from the interview documents. We will not use your name in any of our reports and presentations. Only the researchers will be able to see your interview documents. We will keep your interview recording and documents on a password-protected computer and documents will not be moved from this location. All survey data is collected anonymously, no one will know it was you that completed the survey.

If we use a quotation that you provided, your identity will be kept anonymous. The information you provide may be presented at conferences and/or university lectures and/or published in academic journals. However, study results will be presented in summary form and we will not use names or any personally identifying information.

During research studies it is important that the data we get is accurate. For this reason, your data, may be looked at by researchers from the University of Alberta or people from the Health Research Ethics Board.

What will happen to my data after the study?

We will securely keep your survey and interview data for five years. After five years, we will destroy all the research data.

Can I withdraw from the study?

Yes, participation in this research is voluntary. You can choose to withdraw from the study at any time. If you do not want us to use your data in our research, you will have until 1 week after the interview to inform us. If you request that we do not use your data prior to the deadline, we will destroy the audio recordings and documents immediately. You can contact any of the researchers on page one of this document, either by phone or email, to modify details, or withdraw. Please note that we will not be able to remove data once it has been transcribed (7 days after the interview). Demographic information collected through the online survey is anonymous. This information will not be able to be removed from the data set once the survey is submitted.

How will we use your information?

Using the information from the interviews, we will decide how to proceed with further research. Possible study results may be published in academic journals, presented at conferences, and/or included in a thesis (i.e., a written document describing this research). If you are interested, we will provide the overall anonymous results of this study to you to share with others.

What if I have additional questions?

You can ask any questions that you may have about the study. Please contact Megan Pohl, Project Leader, at 780-492-6124 or pohl@ualberta.ca, or Dr. Sarah Elliott, Study Coordinator, at se2@ualberta.ca.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by a Health Research Ethics Board at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

Thank you very much for taking part in this study.

Appendix B: Demographic Question Guide

Understanding the Online Mental Health Information-Searching of Youth: A Qualitative
Descriptive Study (Project Number: Pro00109735)

Thank you for your interest in this project! Please answer the optional demographic questions below before taking part in your interview. Your answers will be anonymous and will not be linked with your interview data.

1) What is your age in years? (i.e., 19)

2) What gender do you identify as? (e.g., male, female, non-binary, transgender, other)

3) What is your ethnicity? (e.g., White, Black, Asian, etc.)

4) What is your current education level? (e.g., high school, university, trades school)

5) What is your City/Town/Community of Residence? (e.g., Edmonton)

6) Do you live in a more urban or rural location?

7) Do you have siblings that live with you?

Appendix C: Final and Modified Interview Guides

Interviewer Notes:

“Hi, I am [Insert Name]. I’m one of the researchers on this project. Our research team wants to understand how youth search for mental health information online. Today we will be talking about a couple topics related to this question, and it would be of most value to this research if you are able to provide as open and honest answers as you can. Does that sound okay with you?”

Before we get started, I want to make sure we are on the same page as to what we mean by searching for online mental health information. Mental health is something that everyone has and is influenced daily by both internal and external factors, such as events that occur in your day-to-day life. Mental health affects how we think, act, and feel. It also affects how we relate to others and make decisions. Mental health can vary day-to-day, and extended periods of poor mental health can sometimes indicate a mental health disorder such as depression or anxiety. Do you have any questions about what mental health is?”

Online information-seeking involves an online search for information. This behavior can take many forms: it can occur through a computer or a phone and can occur on websites or social media amongst other approaches. We are interested in how youth search for mental health information online. Examples of searching for mental health information online include searching for information about the signs and symptoms of a mental illness, looking for self-assessment tools to assess your own mental health, looking for resources to support your mental health, or searching for information about why you feel your mental health is poorer than usual. Do you have any questions about what mental health information-searching is?”

Let the participant know that the interview will be recorded and when recording starts.

Throughout the interview, take note of environment and general observations of participant and reiterate that the participant can choose to stop participating at any time without consequence.

Final Interview Guide for Youth Interviews (i.e., post-pilot testing interview guide)

Questions around searching for mental health information online:

- 1) Tell me about how you search for mental health information online.

Probe: What is the mental health topic of the information that you search for? (e.g., anxiety, depression, eating disorders, etc.)

Probe: When was your most recent search for this information?

Probe: How often do you search for this information?

Probe: What happens before you start searching for mental health information online?

Probe: Where would you look for mental health information online? (e.g., websites, social media, online social networks, contact information for mental health professionals)

Probe: Do you use a search engine (e.g., Google, Internet Explorer, Firefox) or social media (e.g., Instagram, Reddit)?

Probe: Why do you go to *blank* to find this information?

Probe: What happens after you find mental health information online?

Probe: What factors do you think influence how you search for this information (i.e., time of day, family's perceptions of mental health, presence of others)?

- 2) Tell me about an experience you have had searching for mental health information online

Probe: What prompted you to start searching (e.g., feeling stressed, had a question in mind, were feeling curious and wanted to know more about mental health)?

Probe: What did you find? (e.g., self-help resources, people's experiences, self-assessment tools)

Probe: Did you find what you were looking for? Where?

Probe: What did you do when you found (or didn't find) this information?

Probe: Can you provide more details about this experience?

Probe: Were there any barriers to searching for this information? Provide examples

Probe: Was there anything that made this search easier?

- 3) What concerns or worries do you have about searching for mental health information online?

Probe: Do you have concerns about your privacy? (alternative wording: others knowing you are searching for this information, anonymity)

Probe: Do you worry anyone will see your search history?

Probe: Have you searched for this information using means to hide your identity, such as incognito mode?

Probe: Do you feel you know how to search properly for the information you want?

Questions about helpfulness of online mental health information:

- 4) When you're searching for mental health information, is there a type of information you want to find? (e.g., information on a mental health condition, social support from others with similar experiences, referral for therapy)

Probe: Is there a type of online mental health information you would not want to find?

- 5) In your *previous experience looking for mental health information*, what information did you find the most helpful?

Probe: What does that look like? (i.e., format, layout, impressions)

Probe: Was the language level of the information understandable? What made it understandable (or not understandable)?

Probe: Where does this information come from? (e.g., doctors, other health professionals (psychologist), credible organizations, peers)

Probe: What information did you find least help?

- 6) What recommendations would you give to make this information more helpful for you?

Questions about online mental health information credibility/trustworthiness:

- 7) Is determining the trustworthiness of this information important to you?

- 8) How did you assess the trustworthiness of the information you found when looking for mental health information online?

Probe: Are there any clues you look for to assess trustworthiness? (i.e., a university's or hospitals logo, a health agency such as the Canadian Mental Health Association, a physician's approval, citations and references, a professional looking website)

Probe: How do you tell if something is not trustworthy?

- 9) What would you do after finding a source that you think is trustworthy?

- 10) What would you do after finding a source that you didn't think is trustworthy?

General Wrap-up Questions:

- 11) What would make searching online for mental health information easier for you?

- 12) Is there anything else you think we should know about how you search for online mental health information?

- 13) What is a main take away from our conversation today that you think we should know about this topic?

Modified Interview Guide for Youth Interviews (i.e., interview guide used for the last interview)

Questions around searching for mental health information online:

1) Tell me about how you search for mental health information online.

Probe: What is the mental health topic of the information that you search for? (e.g., anxiety, depression, eating disorders, etc.)

Probe: When was your most recent search for this information?

Probe: How often do you search for this information?

Probe: What happens before you start searching for mental health information online?

Probe: What prompts you to start searching (e.g., feeling stressed, had a question in mind, were feeling curious and wanted to know more about mental health)?

Probe: Where would you look for mental health information online? (e.g., websites, social media, online social networks, contact information for mental health professionals)

Probe: Do you use a search engine (e.g., Google, Explorer, Firefox) or social media (e.g., Instagram, Reddit)?

Probe: Are there differences in how search based on where you look (i.e., social media vs. a website)

Probe: Are you exposed to MH information on social media that you didn't search for?

Probe: Does this influence how you search for MH information?

Probe: Why do you go to *blank* to find this information?

Probe: What happens after you find mental health information online?

Probe: What factors do you think influence how you search for this information (i.e., time of day, family's perceptions of mental health, presence of others)?

Probe: What influence has what you learned in school had on how you search?

Probe: What did you do when you found (or didn't find) this information?

Probe: Were there any barriers to searching for this information?

Probe: Was there anything that made this search easier?

- 2) What concerns or worries do you have about searching for mental health information online?

Probe: Do you have concerns about your privacy? (alternative wording: others knowing you are searching for this information, anonymity)

Probe: Do you worry anyone will see your search history?

Probe: Have you searched for this information using means to hide your identity, such as incognito mode?

Probe: Has anything made you more comfortable with searching for mental health information online?

Probe: What was it?

We are just over halfway through the interview and want to check in. How are you doing? Do you have any questions?

Questions about helpfulness of online mental health information:

- 3) When you're searching for mental health information, is there a type of information you want to find? (e.g., information on a mental health condition, social support from others with similar experiences, referral for therapy)

Probe: Is there a type of online mental health information you would not want to find?

- 4) In your *previous experience looking for mental health information*, what information did you find the most helpful?

Probe: What does that look like? (i.e., format, layout, impressions)

Probe: Was the language level of the information understandable? What made it understandable (or not understandable)?

Probe: Where does this information come from? (e.g., doctors, other health professionals (psychologist), credible organizations, peers)

5) What recommendations would you give to make this information more helpful for you?

Questions about online mental health information trustworthiness/credibility:

6) Is determining the trustworthiness of this information important to you?

7) How did you assess the trustworthiness/credibility of the information you found when looking for mental health information online?

8) How would assessing trustworthiness influence how you search?

9) How often would you assess the trustworthiness of information?

10) Are there any clues you look for to assess the trustworthiness of websites? (i.e., a university's or hospitals logo, a health agency such as the Canadian Mental Health Association, a physician's approval, citations and references, a professional looking website)

11) Are there information sources that you go back to more than once?

Probe: What makes you want to go back to this information?

General Wrap-up Questions:

12) What would make searching online for mental health information easier for you?

13) Is there anything else you think we should know about how you search for online mental health information?

14) What is one main take away from our conversation today that you think we should know about this topic?

Appendix D: Youth Partnership Plan and Guidelines

Research Study: The aim of our study is to understand how youth look for mental health information online. We will use a qualitative study design which means we will be collecting non-numerical data through one-on-one interviews. We will be exploring what forms of information youth have been seeking during the pandemic, their preferences, and their perceptions of what is helpful and trustworthy. Understanding youth preferences and online information seeking behaviors will allow for the informed sharing of quality resources to the online locations that youth will be most likely to access them. Further, this will form the foundation for the creation of a tool for youth to support their understanding of how to search for trustworthy mental health information online (e.g., informative pamphlets, a white-board animation video, etc.).

Youth as Research Partners: We are seeking input from 2-3 youth on this study, to act as Youth Partners, and be considered as part of the research study team. Youth Partners will be involved throughout the research study to help inform parts of the study design (e.g., interview guide development and pilot testing, recruitment strategies, etc.), interpret the results, and prepare dissemination (information sharing) products (e.g., manuscript, lay-friendly summaries, presentations, etc.).

Youth Partner engagement will be needed at key time points throughout the course of our study. Time commitments are expected to vary; however, it is anticipated that more commitment will be required during the beginning and end of the study (see Phase 1 and Phase 3), and less during the middle (see Phase 2).

Youth Partners will not be involved as *participants* in the research study but will work alongside researchers as part of the study team. Listed below are the benefits, expectations, outcomes and the anticipated timeframe for collaboration and engagement with Youth Partners.

Benefits to Youth Partners: We hope this experience will provide Youth Partners with insight and knowledge of qualitative research methods (research skills in studying and analyzing non-numerical information), experience working in a research environment, and development of critical thinking and analysis skills.

We would like to offer additional compensation both through payment to, and acknowledgement of Youth Partners.

Non-monetary acknowledgement – we are happy to provide a letter of reference upon request, acknowledging a Youth Partner’s commitment to the research study process. Additionally, at a minimum, we will acknowledge their contribution in the final manuscript describing the results of this project. At a maximum, the opportunity for authorship is available to Youth Partners and further outlined below (See **Opportunity for Authorship and Expectations**).

Monetary acknowledgment (compensation) - Organizations that plan and promote patient-oriented research recommend compensation of \$25/hour. This reflects the compensation of other patient partners working in similar roles.

We aim to acknowledge Youth Partner's commitment to the project through \$25 gift cards presented for each hour of time committed. This will be provided for up to 8 hours of involvement as outlined below (\$200 total). Unfortunately, additional time committed to this project is not able to be compensated and highlighted as optional.

Youth Partners have the choice to waive compensation. This will not impact their ability to continue on as research partners with the study team.

Opportunity for Authorship and Expectations: Authorship is an incredible opportunity for Youth Partners as it acknowledges a significant contribution to the study. If you decide to pursue commitment to this study in line with the authorship requirements, this acknowledgement can (and should) be put on your resume. If you have questions about what authorship can mean for you, please feel free to reach out to Megan (pohl@ualberta.ca).

In order to understand the meaning of authorship, it is important that we understand the publication process. At the end of this study, a manuscript (a written report of the research) will be produced and submitted for publication in a scientific journal. A journal is a collection of research papers that have undergone peer-review and are made accessible to the public (basically, trustworthy research). After initial submission of the manuscript, the journal will send the manuscript back to the authors with edits and comments. The authors will update the manuscript based on the journal reviewers' comments and resubmit the manuscript. This back and forth between the journal reviewers and the authors may happen a few times and can take weeks and even months. Once the manuscript is accepted, it is published by the journal, which makes this paper accessible to the public and other researchers! Sometimes the manuscript is not

accepted by the first journal. In this instance, it will be submitted to multiple different journals, one at a time, before it is accepted and published. We will have more detailed conversations about this process in our meetings as it becomes relevant and the opportunity to ask questions about how this relates to you will be provided.

Authorship provides credit to those who provide substantial contribution to a study, but also implies responsibility and accountability. For this work, we will follow the suggestions of The International Committee of Medical Journal Editors' (ICMJE) four criteria for authorship. The ICMJE requires the following four criteria for authorship:

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
2. Drafting the work or revising it critically for important intellectual content; AND
3. Final approval of the version to be published; AND
4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Based on this outline, if you decide to participate in some of the optional components of this work, you will have a right to authorship. Exciting! Optional components are for those who would like to go above and beyond in their commitment to the project, develop deeper skill in qualitative research, and take on a greater leadership role. We are not able to provide monetary compensation for the optional components of this project.

It is possible that for unexpected reasons you may no longer be able to commit to the project in line with the requirements for authorship. In this instance, you may no longer be considered for authorship, but will be acknowledged in the final manuscript. In this situation, we will have open conversations about all possible ways to preserve your ability to meet the requirement for authorship.

If you qualify for authorship, you also have the right to reject this public acknowledgement. Rejecting authorship will not have an impact on your ability to be involved as a Youth Partner in this research study.

If you have any additional questions on authorship, I am happy to discuss this in our meetings.

Commitment: It is anticipated that Youth Partners will be consulted every other month in a 1-1.5 hour Zoom meeting. Additional meetings may be requested for the first couple of months (Phase 1). Youth partners will be consulted on their personal schedules to ensure meetings are able to be attended by all. The school and work schedules of Youth Partners will be discussed before creation of the schedule for meetings. It is anticipated that meetings will take place after school/work hours. Standing monthly meetings will be planned in advance. Prior to meetings youth will be sent a brief agenda and, in some instances, some questions to reflect on prior to the meeting. The preparatory work for each meeting (i.e., reading agenda, reflecting on questions, and emails) is anticipated to take less than 15 minutes. If partners are unable to attend a meeting it is expected that the study lead (Megan Pohl: pohl@ualberta.ca) is informed as soon as possible. Alternative arrangements to meet virtually will be explored.

Confidentiality: We request that personal identifying information about your Youth Partner teammates not be shared outside of the research group. Your personal information will not be shared by our research group without your consent and would be limited to authorship amongst other possible reasons (e.g., your involvement in co-presenting findings).

Study results must not be shared outside of conversations within our research group until findings are released to the general public. We may request that you sign a confidentiality agreement in alignment with this.

Safety: In Phase 2, conversations about your own mental health experiences may be of relevance to providing insight on theme development. Choosing to share these experiences could be potentially triggering for you. If you feel triggered, in distress, or anxious about your participation before or after these discussions we encourage you to connect with the resources outlined on the Mental Health Resource Information Sheet for this study. If these resources do not fit your needs or you have other questions or concerns, please contact Megan Pohl. We can work together to identify how to keep you most safe in your role as a Youth Partner.

Reflections: Youth Partner's involvement in the study is of incredible value to our research team. Your engagement in this project may also help inform other researchers employing patient engagement strategies such as youth partnership. As such, we will ask for your reflections and thoughts around your engagement as a Youth Partner throughout the study. At the end of the study, we would also like the opportunity to chat with you in a virtual one-on-one interview

format to discuss your thoughts on how you were engaged throughout the study, and whether involvement as a Youth Partner was a meaningful experience for you.

Schedule for Youth Partnership:

March-May 2021

A) Pre-study team meeting: potential Youth Partners will be presented the content of this document and provided the opportunity to ask any questions they might have before Youth Partnership activities begin. Youth will be given time to consider if Youth Partnership is a commitment they wish to take on.

1) PHASE 1: Study design and protocol development:

- Youth Partners will be asked to provide their input and give feedback on study materials e.g. Study Information Letter and Consent Form, Youth participant interview question guide, youth participant recruitment materials (posters, social media posts etc.).
- Youth Partners will be asked to share their thoughts and provide input on participant recruitment strategies - e.g. how and where to recruit youth for the study
- Youth Partners will be asked to advise on appropriate compensation for youth participants in the study

- **OPTIONAL:** Youth Partners may be asked to be involved in pilot testing of the interview process, e.g., interviewed according to the question set developed and providing feedback afterwards to the study lead
- **OPTIONAL:** Youth will be asked to provide support in recruitment of youth study participants through their own networks if possible (e.g., social media, advisory groups of which they are members, etc.)

May-October 2021

2) PHASE 2: Data generation and analysis:

- In this phase, one-on-one interviews with study participants will be conducted by the project lead (Megan). Transcription of the interviews (transforming the interviews' audio into text), and themes regarding youths' online information seeking behavior, will be developed. Themes are patterns of meaning identified in the interviews with youth participants. These themes will be presented to Youth Partners who will be asked to reflect on if the identified themes are reflective of youth's experiences with online mental health information-seeking.
- Youth Partners will be asked to identify questions for the data analysts to explore
- Youth Partners will be asked to participate in discussions with researchers to provide insight into the results and support interpretation of the findings through a youth lens

November 2021-April 2022

3) PHASE 3: Writing up the results and dissemination:

- Youth Partners will be asked to spend up to 2 hours (over the span of Phase 3) reviewing the manuscript
- Youth Partners will be consulted to share their thoughts on dissemination strategies for the results
- Youth Partners will be asked to read and provide thoughts and feedback on dissemination materials (e.g., manuscript, presentations, posters, lay-friendly summaries)
- **OPTIONAL:** Youth Partners have the opportunity to support in this stage by providing input and editing segments of the manuscript with support from the project lead
- **OPTIONAL:** Youth Partners may be asked to support in the active dissemination of results (e.g., sharing summaries through social media channels or co-present to youth advisory groups with which they are members)
- **OPTIONAL:** Youth Partners will be supported in presenting findings formally at research days and conferences if applicable
- **OPTIONAL:** If Youth Partners are interested in authorship, according to institutions that provide guidance on authorship, it is a requirement that the Youth Partners help draft the manuscript or revise it critically, approve the final version to be published, and agree to be accountable for all aspects of the work

- 4) **Wrap-up:** One-on-one interviews (30-60 minutes) with Youth Partners to reflect on their involvement in the project will be conducted

Youth will be compensated for up to 8 hours of input through gift cards provided at a \$25/hour interval (up to \$200 total). The 8 hours will be distributed over the 5-6 meetings and their time independently reviewing the manuscript and other materials. Additional time and input are greatly appreciated, but are not a requirement of a commitment to youth partnership.

Appendix E: Mental Health Information Sheet

Contact Information for Mental Health Supports (Project Number: Pro00109735)

Title of Research Project: Understanding the Online Mental Health Information-Searching of Youth: A Qualitative Descriptive Study

Principal Investigator: Megan Pohl, BSc University of Alberta Phone: 780-863-1099 Email: pohl@ualberta.ca	Faculty Supervisor: Lisa Hartling, PhD University of Alberta Phone: 780-492-6124 Email: hartling@ualberta.ca	Study Coordinator: Sarah Elliott, PhD University of Alberta Phone: 587-341-5520 Email: se2@ualberta.ca
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If you are in immediate danger, please **call 9-1-1** or go to the nearest hospital.

The document may be helpful if you are feeling anxious, stressed, or overwhelmed after taking part in this research. The information below includes the contact information for mental health supports and services. Many of the crisis lines may be able to connect you with other long-term mental health supports if needed.

Contact Information:

1) **Kids Help Phone:** Provides confidential mental health support to Canadians 5-29 years old. Available 24 hours a day. Call 1-800-668-6868 (toll-free) or text CONNECT to 686868.

2) **Location Specific Crisis Lines:**

British Columbia:

a) Crisis Line Association of BC: (24 hours): 1-800-784-2433 310

b) BC Child/Youth Crisis Line (24 hours): (250) 723-2040

Alberta:

a) Edmonton: CMHA Edmonton Region. Mental Health Crisis Line (24 hours):
1-800-232-7288

b) Calgary: Distress Centre Calgary. Mental Health Crisis Line (24 hours): (403)
266-HELP (4357). Crisis Chat Support: www.distresscentre.com

Again, if you are experiencing acute distress, please contact emergency services (9-1-1) or connect with your previous mental health supports.

Appendix F: Recruitment Materials

Social Media Post 1:



We want to know how you search for mental health information online!

Are you 15-24 years?
English-speaking?
Canadian ?
Join a one hour online interview and complete a 5-10 minute survey

 Participants will be compensated with a \$15 gift card

 pohl@ualberta.ca
780-492-6124

This study is being conducted at the University of Alberta. If you have any questions or would like to participate, please contact Megan Pohl

Understanding Online Mental Health Information-Searching Behaviours of Youth: A Qualitative Descriptive Study (Pro00109735)

Are you between the ages of 15-24?

English-speaking? Canadian?
Searched for mental health information online before?
Able to participate in an interview independently?



We want to know more about how you search for mental health information online!

Contact us today!

Participants will be compensated with a 15\$ gift-card



POHL@UALBERTA.CA



780-492-6124
[Call Only]

Understanding Online Mental Health Information-Searching Behaviours of Youth: A Qualitative Descriptive Study (Pro00109735)

The study is being conducted at the University of Alberta and involves the completion of a one hour online interview and a short 5 minute questionnaire.

WE WANT TO KNOW HOW YOU SEARCH FOR MENTAL HEALTH INFORMATION ONLINE

Join us to for a one hour online interview and complete a short 5 minute questionnaire

ARE YOU...

- Aged 15-24?
- Experienced in searching for mental health information online?
- Canadian English-speaking?
- Able to participate in an interview independently?



Participants will receive a \$15 gift card



pohl@ualberta.ca
780-492-6124 (call only)

The study is being conducted at the University of Alberta. If you have any questions or would like to participate, please contact Megan Pohl

Understanding Online Mental Health Information-Searching Behaviours of Youth: A Qualitative Descriptive Study (Pro00109735)

Appendix G: Youth Research Groups Contacted for Participant Recruitment

Canadian Youth Research Groups Contacted for Participant Recruitment:

Advisory Council (CAYAC)

BC Children's Hospital Youth Advisory Committee

KidsCan Young Persons' Advisory Group

Métis Nation BC Métis Mental Health and Wellness Initiative

CAMH Youth Engagement Initiative/National Youth Action Council

HEAL Youth Advisory Council

Young Canadians Roundtable on Health

Stollery Youth Advisory Council

Holland Bloorview Youth Advisory Council

CIHR IHDCYH Youth Advisory Council

CHEO Youth Forum

London Health Sciences Centre, Children's Hospital Child & Youth Advisory Council

Lethbridge Youth Advisory Council

Emerging Youth Consultancy

Youth Addiction and Mental Health Provincial Advisory Council

Appendix H: Questions from the Innovate Youth Engagement Guidebook for Researchers

Darnay K, Hawke LD, Chaim G, Henderson JL, INNOVATE Research Team. INNOVATE Research: Youth Engagement Guidebook for Researchers. Toronto, ON: Centre for Addiction and Mental Health; 2019.

Meeting De-briefing Questions for Youth:

- What went well or can be improved for future meetings?
- Is there anything that youth did not understand that you can clarify?
- Are there any areas where youth wanted to give feedback but did not?
- Did they feel heard?
- What changes can be made to help them contribute to meetings in the future?

Post-study Questions for Researchers Engaging Youth:

- How valuable did the researchers consider the youth role on the project?
- What project phases or activities did youth participate in?
- To what extent were youth involved in key decision making on the project?
- To what extent did the team listen to and act on youth feedback and recommendations?
- How did youth engagement influence the project?
- What was the time and financial investment required to engage youth?
- What did engagement allow your team to do differently?
- What products or deliverables did youth stakeholders develop or co-develop?
- What presentations did youth participate in?

Post-study Questions for Engaged Youth:

- How valuable do youth find their role on the project?
- What project phases or activities did youth feel they were involved in?
- To what extent do youth feel that they have been involved in key decision making on the project?
- To what extent do youth think their feedback and recommendations were listened to and acted upon?
- How do youth feel they influenced the project?
- To what degree do youth feel there was there transparency in decision-making?
- Do youth feel they were provided with opportunities for growth and development?
- How do youth feel about the support they received from a project ally?
- Do youth feel that the project environment was youth friendly? (i.e., project meetings, workspace, relationships with team members, etc.)

Appendix I: Post-study Questions for One-on-one Youth Partner Meetings

- How did you feel about being engaged in this project?
 - What was this experience like? (positive/negative/other)
 - Did you feel you were able to share your views and thoughts freely without judgement?
 - What impact do you think this engagement had on your life? (positive/negative/other)
- Were there areas of the project you felt were easier to be engaged in than others (ex. participant recruitment, data analysis/theme development, naming themes, suggesting discussion points, manuscript writing?)
- To what extent do you think your feedback and recommendations were listened to and acted upon? (a lot, a little bit, neutral, unsure)
- Was the Youth Engagement Guideline/Plan useful? Was there anything you would add to it or change?
- How did you feel about communication with/from the research team? (ex. Frequency, updates, youth-friendliness)
- If we were to involve youth partners in a project again, what recommendations for improvement would you make?