

**Drug Education Centred on Youth Decision Empowerment (DECYDE): A Mixed-Methods
Approach to Harm Reduction Substance Use Education**

By

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Abstract

There is an identified critical gap in substance use education for school-aged youth, a vulnerable population susceptible to the health and safety consequences of substances. This project is a sub-part of an initiative led by the Cannabis Health Evaluation & Research Partnership (CHERP) team at Memorial University compiled of youth, people with lived and living experience, educators, pharmacists, psychologists and social workers. With support from key collaborators, including the Government of Newfoundland and Labrador's Departments of Education and Health and Community Services, the NL Centre on Substance Use, Newfoundland and Labrador Schools, the Newfoundland and Labrador Teacher's Association and our Youth Advisory panel, we aim to design, implement and evaluate a substance use education strategy for school-age youth titled Drug Education Centered on Youth Decision Empowerment (DECYDE). The current project aimed to support the development and evaluation of DECYDE through a citizen-engaged, interdisciplinary approach. The first study is a scoping review of evaluated harm reduction programs directed toward school-aged youth in Canada and the United States. The findings identified limited available harm reduction programs for school-aged youth. With this identified gap, the purpose of the second was to gain a better understanding of educators' perspectives on substance use-related issues and to explore strategies for delivering and assessing effective drug education strategies to best support students' substance use health literacy. Educators stressed the prominent societal concern of student substance use in the province and stressed a need for education that is universal, implemented early, easily accessible for youth, and engages families. Further, they emphasized key aspects that drug education should cover, including up-to-date resources, harm reduction strategies, and diverse and culturally sensitive content. Lastly, there was ambivalence on how to

evaluate drug education, as the dire need was placed at the forefront, over assessment. Although, they did note the importance of student autonomy, ensuring they have choice in their evaluation as well as ensuring students are engaged. Findings from these projects will support the development, delivery and evaluation of DECYDE.

Key words: substance use, harm reduction, youth, education, mixed-method, educators

General Summary

This project is a sub-component of the Drug Education Centred on Youth Decision Empowerment (DECYDE) strategy - a new substance use education program under development that uses a student-centred skills-based education approach, emphasizing learning skills that promote and protect student health and well-being. This project aimed to support and inform the development, delivery and evaluation of DECYDE by identifying harm-reduction substance use programs, understanding their implementation and evaluation methods and gathering insight from educators on their experience with student substance use and opinions on how to deliver substance use education and assess students' skills-based learning. The first study was a scoping review that evaluated harm-reduction substance use education programs in Canada and the United States, which highlighted a gap in comprehensive harm-reduction programs for school-aged youth. The second study explored educators' perspectives on substance use-related issues and strategies for delivering and assessing effective drug education strategies to best support students' substance use health. Educators highlighted that student substance use is a prominent concern in Newfoundland and Labrador (NL), and the need for harm reduction education that is age-appropriate, implemented early, easily accessible, up-to-date, culturally sensitive and engages parents and the community. Findings from this work informed the DECYDE strategy and highlighted areas for more research.

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Table of Contents

Abstract	ii
General Summary	iii
Acknowledgements	iv
Table of Contents	vi
List of Tables	viii
List of Figures	ix
List of Appendices	x
Chapter 1: Harm Reduction Substance Use Education: An Overview	1
Overview.....	2
Youth Substance Use.....	4
Substance Use Education.....	7
Drug Education Centred on Youth Decision Empowerment (DECYDE).....	12
Primary Research Objectives.....	15
Thesis Structure.....	16
Chapter 2: Manuscript 1 - Mapping the Landscape: A Scoping Review of Evaluated Substance Use Harm Reduction Programs for Youth	17
Abstract.....	18
Introduction.....	19
Methods.....	24
Results.....	26
Discussion.....	35
Conclusion.....	39

Chapter 3: Manuscript 2 - Voices of Educators: Exploring Educators’ Perspectives of Substance Use Education.....	40
Abstract.....	41
Introduction.....	42
Methods.....	47
Results.....	50
Discussion.....	61
Conclusion.....	66
Chapter 4: Translating Findings into Context: Advancing Substance Use Education for Youth and Future Directions.....	67
Summary of Main Findings.....	68
Practical Implications.....	69
Directions for Future Research.....	79
Conclusion.....	80
References.....	81
Appendices.....	103

List of Tables

Chapter 2

Table 1. Harm Reduction Principles Criteria for Inclusion.....	25
Table 2. Program Characteristics.....	28
Table 3. Program Classification.....	30
Table 4. Program Description and Outcome.....	31
Table 5. Program Evaluation.....	34

Chapter 3

Table 1. Summary of Educator Characteristics.....	48
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List of Figures

Chapter 1

Figure 1. Overview of DECYDE.....14

Chapter 2

Figure 1. PRISMA Flow Chart of Literature Search Review and Inclusion Process.....27

Chapter 3

Figure 1. Overview of the Higgins et al. (2009) Social Ecological Model of Adolescent Health
Literacy.....57

List of Appendices

Appendix A. Scoping Review Search Strategy.....101

Appendix B: Educator Focus Group Interview Guide.....154

Chapter 1:

Harm Reduction Substance Use Education: An Overview

Authorship statement: This chapter was written by myself, Emily Rowe, and reviewed by my supervisors, Dr. Nick Harris, and Dr. Lisa Bishop and my committee member, Dr. Jennifer Donnan.

Overview

Youth substance use is a prominent societal concern in Canada as consumption rates and high-risk substance use behaviours are rising. Currently, there is a limited number of programs in substance use education targeting youth in Canada that are effective at promoting safe substance use behaviours among youth. Substance use education often focuses on abstinence-based approaches, which have been deemed ineffective at minimizing substance use-related harms among youth. Therefore, it is essential to implement education that promotes harm reduction strategies rather than solely focusing on abstinence. The Drug Education Centred on Youth Decision Empowerment (DECYDE) strategy is a new program under development by the Cannabis Health and Research (CHERP) team – an interdisciplinary team of researchers at Memorial University - that uses a student-centred skills-based education approach, emphasizing learning skills that promote and protect student health and well-being. In order to effectively implement DECYDE, it is critical to gather evidence-based information and input from key stakeholders, which is essential to ensuring substance use education targeting youth is effective at reducing unsafe behaviours.

The current manuscript style thesis aimed to identify harm reduction substance use programs, understand their implementation and evaluation methods and gather insight from educators on delivering substance use education and assessing students' skills-based learning. Knowledge gained from this project will support developing and evaluating the DECYDE education strategy. The first chapter of this thesis provides an overview of the status of youth substance use in Canada and the need for harm reduction education directed at school-aged youth. Chapter two is a scoping review of evaluated harm reduction substance use education programs in Canada and the United States. Chapter three explores educators' perspectives on

substance use-related issues and strategies for delivering and assessing effective drug education strategies to best support student's substance use health literacy. The final chapter summarizes the findings and explores implications for the DECYDE strategy to target the gap in substance use education in Newfoundland and Labrador (NL).

My (Emily Rowe) interest in this research project stems from my commitment to supporting youth and young adults who are vulnerable to the risks associated with substance use. This commitment is also reflected in my academic journey, as I have recently been accepted into a Doctor of Psychology (PsyD) program with ambitions to become a child clinical psychologist working with youth struggling with co-morbid mental health and substance use. My passion for ensuring youth are supported and have access to valuable resources to support their development is rooted in my academic background, and hands-on experience working with youth across Newfoundland and Labrador. I work with youth in various capacities, including my leadership roles in several mental health organizations, as a tutor for youth in care, and as a coach of youth with diverse abilities. As an undergraduate and now graduate student with the Cannabis Health Evaluation and Research Partnership (CHERP) team for three years, I had the unique opportunity to contribute to the DECYDE project in the initial stages, and now I take on a lead role in our work with youth. Specifically, I lead several of our youth-related research projects. I am the co-chair of our Youth Advisory Panel, where we solicit input from 12 diverse youth from across the province and ensure it is incorporated in the development of DECYDE. While I play a lead role in the DECYDE project, this research is supported by a collaborative team of interdisciplinary professionals. Throughout this thesis, I refer to my team members using their initials to acknowledge their contributions. It is important to clarify that while I am the primary author and lead researcher for each chapter, the support from my team members and co-authors should be

acknowledged. They provided valuable feedback, assisted with data collection and offered valuable feedback and support through all stages.

Youth Substance Use

Prevalence of youth consumption and high-risk behaviours

Substance use disorders are among the most prevalent mental health disorders in Canada, with young people (age 15-24) more at risk compared to any other age group (Centre for Addiction and Mental Health, n.d; Pearson et al., 2013). Substance use initiation typically occurs around 13-14 years old, and early onset increases the risk of developing a substance use disorder (Kingston, 2017; Tanaree, 2017; Trujillo, 2019). Substance use among youth and young adults is prevalent, and recent years have witnessed a troubling surge in substance use rates. Alcohol is the most common substance used by Canadian students (grade 7-12), with 39% reporting past year consumption (2021-22), followed by energy drinks at 38%, cannabis at 15% and illegal drugs (e.g., cocaine, bath salts, MDMA, hallucinogens) at 7%. Tobacco and nicotine remain common, with 29% having tried an e-cigarette and 15% a cigarette. It is important to note that substance use surveys are conservative and may not fully capture the extent of youth substance use within Canada (Health Canada, 2024).

High-risk substance use behaviours

While student substance use rates are concerning, even more concerning is the prevalence of high-risk substance use behaviours among youth (e.g., binge drinking, polysubstance use, impaired driving). Although alcohol may be consumed more frequently by adults, adolescents tend to consume greater quantities per occasion (Spear, 2018). One in five students (grades 7-12; 21%) reported high-risk alcohol consumption (e.g., binge drinking; Health Canada, 2024). In Canada, binge drinking occurs when the blood alcohol level reaches 0.08 g/dL and typically

follows the consumption of 5 or more standard alcoholic beverages for males and four or more for women over the course of around 2 hours (Molina & Nelson, 2018; Paradis et al., 2023). However, this definition is based on adult levels, whereas youth binge drinking is estimated to occur with an intake of 3 or more drinks within a 2-hour period (Chung et al., 2018). Binge drinking is a common practice among youth, and has severe consequences, including alcohol poisoning, alcohol-related blackouts, injury and death (Chung et al., 2018). Binge drinking can also result in hazardous decisions, like driving under the influence. Among Canadian students in 2021-2022 (grades 7-12), 5% reported operating a motor vehicle after consuming alcohol or cannabis, 32% reported being a passenger in a vehicle where the driver consumed alcohol, and 16% reported the same with cannabis (Health Canada, 2024).

Alcohol, tobacco and cannabis are three of the most commonly used substances among youth in Canada (Zuckerman, 2019). Polysubstance use - the concurrent use of multiple substances – has increased among adolescents (Winstock, 2014; Zuckerman et al., 2019). In 2017/18, alcohol, cannabis, and e-cigarette poly-substance use rose among youth. Twelve percent of grade 7 to 12 students reported consuming cannabis and alcohol on the same occasion in the past year, while 6% reported consuming alcohol and an energy drink on the same occasion (Health Canada, 2020). Additionally, co-use of those three substances plus the use of cigarettes rose from 6 percent (2013/14) to 9 percent (2017/18; Zuckerman et al., 2019). Further, the co-use of alcohol and another drug on the same occasion was higher among students with diverse gender identities (i.e., transgender, gender diverse, and/or questioning students; Health Canada, 2024).

Consequences of youth substance use

Youth substance use consumption is an increasingly common practice (Fabrizio et al., 2013), and the rates of both substance use and high-risk substance use behaviours are alarming. Substance use patterns are typically formed in adolescence, which often result in an increase in the frequency of substance use rather than cessation (Zapert et al., 2002; Zuckerman et al., 2019). Regular and prolonged substance use affects youths' trajectories as they mature and are associated with several long-term physical, mental and social health consequences (Brown et al., 2000; Brown et al., 2004; Canadian Centre on Substance Abuse, 2007; Hall & Solowij, 1998; Kalant, 2004). Problematic alcohol, cannabis and nicotine consumption are associated with several negative health consequences, including memory loss, cognitive deficits, liver diseases, hypertension, brain damage, high blood pressure, respiratory problems and cancer (Canadian Centre on Substance Abuse, 2007). There are also a range of psychosocial consequences associated with youth substance use. Cannabis, for instance, has been linked to several mental health disorders, including schizophrenia, psychosis, depression, anxiety and dependence (Hall et al., 2020; George & Vaccarino, 2015). Excessive alcohol consumption, common among youth, is associated with depression, anxiety and increased risk for dependence. Additionally, research consistently demonstrates the negative social impact of youth substance use, including increased delinquent behaviours, school failure and drop out (Ellickson et al., 2003; Hall, 2006; Lynskey & Hall, 2000; Lynskey et al., 2003).

Youth substance use motivation and knowledge

There are a multitude of biological, psychological and social factors (Foster et al., 2021) that influence youths' decisions to consume substances and engage in high-risk substance use behaviours. Adolescence is a critical developmental period where youth undergo physical, cognitive, and emotional changes and gain more autonomy. These experiences often lead to

confusion, uncertainty, distress, increasing youths' motivations to relieve unwanted emotions, and a tendency to engage in risky and pleasurable behaviours (e.g., substance use; Charles et al., 2015; Fabrizio et al., 2013; Hall et al., 2020; Balogh et al., 2013; Jetha & Segakowitz, 2012). Substances like alcohol, cannabis and nicotine can serve as a coping mechanism for youth to manage stress, anxiety, and other emotional challenges (Canadian Centre on Substance Abuse, 2007; Public Health Officers Report, 2018). Youth may also choose to consume substances for a variety of reasons, such as connecting with peers (Segal, 1996), conforming to peer expectations (Foster & Spencer, 2013), curiosity (Lobo & Roche, 2023), alleviating boredom (Hall et al., 2020; McKiernan & Fleming, 2018), and simply to experiment and have fun (Lobo & Roche, 2023). Another factor contributing to youth substance use is that they may be unaware of the consequences associated with consuming substances. As noted in the literature, youth are misinformed when it comes to substances and often underappreciate the risks (Bishop et al., 2022; Moreland et al., 2020), and overestimate their peers' substance use (Amialchuk et al., 2019). Youth risk perceptions are a key aspect of youths' engagement with substances and their disengagement with substance use education. Higher risk perception is associated with decreased substance use, and changes in risk perception are associated with a reduction in substance use among youth (Grevenstein et al., 2015), which underscores the need for targeted education programs to address these misperceptions and to reduce the risks associated with youth substance use.

Substance Use Education

With the legalization of non-medical cannabis in 2018 in Canada, there was an intended effort to implement public health messaging and education, directed at youth to protect their health and safety. Despite such intentions, there remains an absence in not only cannabis

education (Bishop et al., 2022; Howe et al., 2023), but substance use education as a whole. A scoping review and environmental scan of available cannabis education resources in Canada identified a problem with the current availability, as they are not evaluated and require educators, parents, and youth to self-select resources, which may result in selection bias and do not adequately support education needs (Howe et al., 2023). Further, qualitative work with youth in NL highlighted a gap in universally accessible substance use education that effectively educates youth on the harms of substances and informs them on safe decision-making (Bishop et al., 2023). Instead, it has been consistently noted in the literature that substance use education directed at youth is often biased and follows an abstinence-based approach, which youth are not receptive to, nor is it effective (Bishop et al., 2022; Jenkins et al., 2017; Midford, 2010; Porah-Waller et al., 2013; Slemon et al., 2019; Watson et al., 2019).

Abstinence vs. Harm Reduction

Abstinence-based approaches center on the idea that avoidance of substance use is the only acceptable option and seek to accomplish this by emphasizing the dangers associated with substance use, occasionally employing scare tactics alongside resistance training and peer refusal skills (Midford & Cahill, 2020). Despite the popularity of this approach, research consistently demonstrates that abstinence-based drug education is not supported by students, lacks credibility, is incompatible with youth's experiences with substance use (Watson et al., 2019), has a narrow focus (i.e., prevention and avoidance; Jenkins et al., 2017; Midford, 2010) and has been found to be largely ineffective (Midford & Cahill, 2020). Importantly, abstinence-based programming has also been considered counterintuitive. For instance, the 'Say No to Drugs' campaign is a classic and popular message used to discourage substance use among youth, and while well-intentioned, these abstinence-based messages oversimplify the complexities of substance use (Midford, 2010;

Midford & Cahill, 2020). Abstinence-based messaging often neglects the underlying reason why individuals are motivated to consume substances and instead concentrates on the negative consequences and fails to support those who choose to consume substances.

The D.A.R.E. (Drug Abuse Resistance Education) program is one of the most widely used abstinence-based drug education programs for school-aged youth, implemented across Canada and the United States, and billions of dollars are spent on its provision annually. This program has been continuously criticized and found to be ineffective at reducing youth substance use (Ennett et al., 1994; West & O’Neal, 2004). Additionally, while D.A.R.E. is implemented, in NL, D.A.R.E. is not universally accessible for all schools, especially those in rural communities as they have limited access to law enforcement officers to deliver the curriculum (Bishop et al., 2022). Despite these critiques, the D.A.R.E. program remains popular, possibly due to widespread recognition of D.A.R.E. and the lack of knowledge surrounding the ineffectiveness of abstinence-based programming compared to harm reduction. Private sector sponsorship has played a role in sustaining D.A.R.E. in the schools and increasing visibility and reach of the program. For instance, in NL, organizations like the Growlers – NL’s amateur professional hockey team – have signed a memorandum of understanding with the North East Avalon D.A.R.E. Committee to enhance the delivery of D.A.R.E. in the province (Newfoundland Growlers, 2022). Singh and colleagues (2011) discussed additional reasons for widespread use, despite the lack of empirical support and noted that one explanation is that parents perceive the program to be useful, and school officials do not believe evaluations of D.A.R.E reflect the recent improvements made to the program. Parental concerns with harm reduction approaches and favorability towards abstinence based approaches further contribute to the persistence of

D.A.R.E, as they promise to keep their children from abstaining from using substances, despite limited evidence that supports their effectiveness (Singh et al., 2011).

Compared to abstinence-based approaches, harm reduction emphasizes safety and recognizes that substance use may be inevitable for some youth (Downey et al., 2024; Lee et al., 2011; Midford & Cahill, 2020). It is important to note that abstinence is a key principle of harm reduction, although it recognizes that if an individual does not make the ‘safest choice’ (i.e., abstinence), there are still tools and strategies to avoid, prevent or reduce the harms associated with substance use. Harm reduction continues to garner support, particularly by youth (Bishop et al., 2022), and educators (Downey et al., 2024). Both have highlighted that given the high rates of substance use among youth, it is unreasonable to assume youth will abstain, and therefore, we need to prepare them with the tools and strategies to minimize harm. Programming using a harm reduction program approach has been successful in reducing youth substance use behaviours (D’Amico et al., 2012; McKay et al., 2014; Midford et al., 2014; Poulin & Nicholson, 2005; Wagner et al., 2014).

The Canadian Centre on Substance Use and Addiction created Low-Risk Guidelines (LRG) for alcohol (Butt et al., 2011; Paradis et al., 2023), cannabis (Fischer et al., 2022) and nicotine (Selby et al., 2021), each directed toward Canadians currently or considering using these substances. The guidelines were created to support people's substance use decisions and ensure they are well-informed with accurate and current information on the risks and harms associated with these substances and recommendations on limiting the associated risks. Importantly, these guidelines are intended for individuals of legal age who choose to consume substances; however, since substance use among youth is prevalent and resources are limited (Bishop et al., 2022; Howe et al., 2023; Watson et al., 2019) these guidelines (while not necessarily age-appropriate)

can still be applied and utilized by younger populations. Currently, substance use education is not implemented universally across Canada. Instead, provinces and territories are individually responsible for implementing school-based drug education, which has contributed to inconsistencies and the lack of education.

Substance Use Health Literacy

Health literacy - the degree individuals can find, understand, and use information and services to inform their health-related decisions and behaviours (Healthy People 2030, n.d) - is associated with various risky health behaviours and is a key mediating factor influencing people's substance use decisions (Kinnunen et al., 2022). An individual's health literacy plays a crucial role in their ability to interpret health warning messages and make healthy substance use decisions (i.e., reducing, limiting or avoiding substance use; Kinnunen et al., 2022). Research has demonstrated that school-aged children with higher health literacy are related to positive health outcomes, whereas those with low health literacy are consistently related to poor health outcomes (e.g., lower academic achievement, higher mortality, hospitalization; Paakkari et al., 2019; Rolova et al., 2021). Health literacy can be taught through skills-based health learning, which focuses on developing psychosocial and interpersonal skills through learning problem-solving, collaboration, self-management, coping, critical thinking, and decision-making (World Health Organization, 2003). Both emphasize the importance of skills that promote healthy behaviours, allowing youth to navigate everyday substance use situations throughout their lifetime.

Originally, health literacy was associated with basic literacy skills (e.g., reading, writing and numeracy) in health contexts (Rolova et al., 2021). However, there has been a shift toward comprehensive frameworks to better understand adolescents' health literacy, which includes

intrapersonal, interpersonal and community factors (Higgins et al., 2009). The Social Ecological Model of Adolescent Health Literacy explores the interrelationships between various factors (intrapersonal, interpersonal, and community) that influence an individual's health literacy (Higgins et al., 2009). Although this thesis does not directly explore all these levels, the model provided a guiding framework for interpreting educators' insights into the broader influences on youths' health literacy. Further, this model serves as a tool to explore best practices to implement effective health education strategies that consider the myriad of variables playing a role in youths' health literacy and subsequently promoting healthy behaviours. With the legalization of cannabis in Canada, there was an identified gap in substance use education and limited cannabis knowledge among youth (Donnan et al., 2019). In response to this, our research team – the Cannabis Health Evaluation and Research Partnership (CHERP) team - explored youths' opinions on cannabis education, identifying strengths, potential gaps and educational strategies through qualitative focus groups. Thematic analysis, using the Social Ecological Model of Adolescent Health Literacy (Higgins et al., 2009) led to prominent findings and suggestions made by youth to implement and deliver substance use education that is: 1) universally and easily accessible for students; 2) centred in a harm-reduction approach; 3) interactive and empirically grounded; and 4) implemented in early school years (i.e., grades 4-6) prior to youths' first exposure to substances.

Drug Education Centred on Youth Decision Empowerment (DECYDE)

DECYDE is a multi-modal, evidence-based substance use education strategy that uses harm reduction principles with the aim to empower youth to make safe and informed choices and guide parents and educators to engage in non-judgmental conversations with youth. DECYDE is being developed by our CHERP team – a group of interdisciplinary researchers at Memorial

University. The CHERP team received funding from CIHR and the Canadian Institutes for Substance Use and Addiction (CICSA) to explore how cannabis legalization has affected public health and safety in NL using a patient-engaged approach. A needs assessment with citizens and stakeholders was conducted where protecting youth health and safety by improving their health literacy was identified as a priority (Donnan et al., 2021). Following our qualitative work with youth (Bishop et al., 2022), a scoping review which identified a gap in cannabis education resources (Howe et al., 2023), and a teacher survey (Downey et al., 2024) where educators expressed a need for substance use education, our team focused our priority on the DECYDE strategy. From our work it became clear that DECYDE needed to expand and not be exclusive to only cannabis and instead expand and address broader substance education. Our team received additional funding through the Substance Use and Addictions Program (SUAP), the Government of Canada, and the Government of Newfoundland and Labrador to develop DECYDE. The DECYDE strategy is being developed through engagement and partnership with key partners: students, parents, educators, the Substance User Network of the Atlantic Region, NL Teachers Association, the Government of NL Departments of Education and Health and Community Services, NL Schools, NL Centre on Substance Use, Safe Works Access Program, and Canadian Students for Sensible Drug Policy. My current master's thesis is a sub-component of the DECYDE strategy and is used to further inform the strategy, ensuring it is evidence-based, implemented effectively, and draws on the voices of educators. This thesis aimed to identify harm reduction substance use programs, understand their implementation and evaluation methods and gather insight from educators on delivering substance use education and assessing students' skills-based learning.

Figure 1.

Overview of DECYPDE

Empowering Youth to DECYPDE

MEMORIAL UNIVERSITY
February 2024

What is DECYPDE?

DECYPDE (Drug Education Centred on Youth Decision Empowerment) is a **drug education and awareness strategy** created by an interdisciplinary research team at Memorial University.

MISSION

To provide evidence-based, trauma-informed, substance use education and resources with a focus on prevention and harm reduction for youth, educators, and guardians.

VISION

To empower youth to make safe and informed choices regarding their substance use health.

DECYPDE Materials

Teacher Resources

- **Lesson plans** (Gr. 4-9) aligned with NL health curriculum.
- **Substance Snapshots** provide information summaries about a particular substance.
- **Evidence-based educator resources** provide information on topics related to harm reduction, substance use, and stigma.
- **Educational videos** support delivery of lesson plans.

Public Resources

- **Substance Snapshots** provide information summaries about a particular substance.
- **Harm reduction resources** that share information on topics like naloxone, substance use, and stigma.
- A list of **Supportive Resources** available locally and nationally.

Research & Engagement

- **Public engagement** including events, activities, and advisory panels
- **Presentations** at conferences, educational events, schools and research symposiums
- **Publications** in academic journals, websites and media
- **Research summaries and reports**

FACE Decision-Making Model

Feel **A**ssess **C**hoose **E**valuate

The **FACE decision-making model** is an evidence-based and follows a harm reduction and social-emotional approach. All DECYPDE lesson plans incorporate FACE to help students feel empowered to make safer decisions when faced with substance use and mental health-related situations.

How would you **FACE** this situation?

Funders and Partners:

Canada Health Canada Santé Canada NL Health Services CIHR IRSC Newfoundland Labrador JANEWAY CHILDREN'S HOSPITAL RESEARCH NIA

www.decypde.ca decypde_mun decypde_mun DECYPDEMUN

Primary Research Objectives

As there is a gap in effective harm reduction substance use education in Canada targeting youth, the current project aimed to identify key elements critical for the delivery and evaluation of DECYDE and assessing students' skill-based health learning. The primary research objectives are as follows:

Chapter 2 objectives:

- 1) To identify existing literature on evaluated harm reduction substance, use education programs directed toward school-aged youth that included cannabis as a component of the education.
- 2) To develop a better understanding of how substance use education programs have been evaluated.

Chapter 3 objectives:

- 1) To explore educators' perspectives on students' experiences with substance use.
- 2) To explore educators' perspectives on delivering substance use education in the classroom.
- 3) To explore educators' perspectives on appropriate methods to assess students' skills-based health learning.

Chapter 4 objectives:

- 1) To contextualize the findings within the existing literature and explore implications for the DECYDE strategy to target the gap in substance use education in Newfoundland and Labrador.

Thesis Structure

This thesis follows a manuscript style. The first chapter of this thesis provided an overview of the status of youth substance use in Canada and the need for harm reduction education directed at school-aged youth. The following chapters, 2 and 3, are complete manuscripts written according to journal specifications. Chapters 2 and 3 will sequentially address these objectives, beginning with a scoping review in Chapter 2. Chapter 3 will then present qualitative findings from educators in Newfoundland and Labrador, followed by Chapter 4 which translates the findings from the two studies conducted (Chapter 2 and Chapter 3), and provides implications for harm reduction education and DECYDE. This structure ensures a progression from identifying gaps in the existing research to applying the findings to developing and implementing effective substance use education for youth.

**Chapter 2: Manuscript 1 -
Mapping the Landscape: A Scoping Review of Evaluated Substance Use Harm Reduction
Programs for Youth**

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Abstract

Background: Youth are at an increased risk of adverse outcomes due to substance use, and there is limited evaluated drug education targeting youth in Canada. This scoping review aimed to identify existing literature on evaluated harm reduction substance use education programs that include cannabis and are directed toward youth.

Methods: A scoping review was conducted following the methodological framework outlined by Arksey and O'Malley to identify evaluated harm reduction substance education programs in Canada and the United States for school-aged youth and to synthesize information on the programs and how they were evaluated. A search was conducted in collaboration with a health science librarian to identify relevant articles published between 2012 and 2022 through the following databases: MEDLINE, Scopus, APA PsycInfo, ERIC, Academic Search Complete, Social Work Abstracts, and Embase.

Results: Of 3,260 citations, 14 studies met our inclusion criteria, and an additional six unique articles ($n = 20$) were selected for review and charting. Among those studies, 18 programs were implemented in the United States and 2 in Canada; various target populations were identified: high-school students ($n = 4$), middle school ($n = 6$), elementary schools ($n = 2$), at-risk youth ($n = 3$) and other ($n = 5$). The majority of programs focused on reducing substance use ($n = 19$), were primary prevention programs ($n = 14$), and used a quantitative evaluation approach ($n = 16$).

Conclusion: The findings of the scoping review highlighted a limited number of evaluated harm reduction programs in Canada and the U.S.A directed towards school-aged youth. Knowledge gained from this scoping review will support the development and evaluation of a drug education strategy that incorporates harm reduction principles for school-aged youth.

Keywords: substance use education; harm reduction; youth; students; program evaluation

Introduction

With the legalization of cannabis in Canada in 2018, one of the primary objectives put forth by The Government of Canada was to protect youth by restricting youth access to cannabis and raising awareness of the risks associated with cannabis use (Cannabis Act, 2018). However, youth cannabis and overall substance use remain a prominent societal concern in Canada as consumption rates and high-risk cannabis use behaviours are rising (Hammond, 2020; Health Canada, 2024; Leatherdale, 2012). Alarming, among grade 7-12 students, in 2021/22, 39% consumed alcohol in the past year, 18% consumed cannabis, 19% used a tobacco product, and e-cigarette use doubled from 2016 to 2019 (Health Canada, 2020). Further, alcohol, cannabis and nicotine initiation occur at a remarkably early age (i.e., approximately 14 years old; Health Canada, 2024), and early initiation and rapid escalation of substance use behaviours are predictive of future substance use problems and the development of a substance use disorder (Health Canada, 2008).

The high rates of substance use among Canadian youth are particularly concerning as youth are vulnerable to adverse outcomes associated with substance use. Youth substance use is associated with significant cognitive deficits (e.g., executive functioning and neuro-cognitive problems; Brown et al., 2000; Hall et al., 2020); social problems (e.g., lower income, unemployment, and lower life satisfaction), psychological deficits and mental health challenges (e.g., anxiety, depression; psychosis and suicidal ideation; Conway et al., 2018; Hall et al., 2020; Jacobus & Tapert, 2014), poor academic outcomes (Bugbee, 2019; Hall, 2015), increased feelings of apathy, and decreased motivation (George et al., 2015). Even more alarming is the prevalence of high-risk substance behaviours amongst youth (e.g., hazardous drinking, driving under the influence, polysubstance use, and early initiation; Donnan et al., 2022; Zuckerman et

al., 2019). Adolescence is a difficult stage of development that includes great physical and psychological change, confusion, uncertainty, and significant distress (Charles et al., 2015; Hall et al., 2020). Adolescents are susceptible and motivated to engage in riskier and more pleasurable behaviours (Balogh et al., 2013; Jetha & Segakowitz, 2012). From the viewpoint of youth, substance use, and high-risk substance use behaviours can offer rewards and risks; it is an opportunity to experiment with psychoactive substances, bond with friends, and engage in ‘adult-like’ behaviours (Ball et al., 2022).

The Canadian Centre on Substance Use and Addiction created Low-Risk Guidelines (LRG) for alcohol (Butt et al., 2011; Paradis et al., 2023), cannabis (Fischer et al., 2022), and nicotine (Selby et al., 2021), each directed toward Canadians currently using or considering using these substances. The guidelines were created to support people's substance use decisions and ensure they are equipped with accurate and current information on the harms associated with these substances and recommendations on minimizing the associated risks. These harm reduction guidelines are especially valuable as existing evidence-based substance use resources are limited (Howe et al., 2023; Watson et al., 2019) or follow an abstinence-based approach, which research has identified as ineffective (Bishop et al., 2022; Slemmon et al., 2019; West & O’Neal, 2004).

Given the health risks associated with youth substance use, educating youth about substances and safer substance use and equipping them with the appropriate tools to make safe and informed choices is critical. However, drug education directed toward youth populations often follows an abstinence-based approach (D.A.R.E, 1983) which involves messaging on avoiding substance use entirely, as opposed to harm reduction approaches, which aim to reduce drug-related harms (Lenton & Single, 1998). Past research has highlighted the ineffectiveness of abstinence-based approaches, as youth are not receptive to such strategies (Bishop et al., 2022; Porah-Waller et al.,

2013; Slemon et al., 2019), they are incompatible with youths' personal experience with substances (Watson et al., 2019), and they have a narrow focus on preventing or avoiding use (Jenkins et al., 2017; Midford, 2010). Midford (2010) reviewed the nature of prevention programs and questioned whether it would be more beneficial if the purpose were to prevent use or prevent harm. Notably, he highlighted the unrealistic nature of preventing consumption of all substances, as drugs like alcohol, tobacco, and cannabis are becoming a normative part of social and cultural aspects of everyday life. The Drug Abuse Resistance Education (D.A.R.E.) program is an example of an abstinence-focused prevention program that has been widely implemented across Canada and the United States; however, it has been deemed ineffective at minimizing substance use harms (Bishop et al., 2022; Singh et al., 2011; Tremblay et al., 2020; West et al., 2004).

A recent study found that when teachers were asked about their perspectives on youth substance use education, many educators expressed support for both harm reduction and abstinence approaches (Downey et al., 2024). This finding is reasonable, as harm reduction and abstinence are not mutually exclusive; harm reduction does not intend to promote drug use, but instead presents abstinence as the best way to avoid substance use harms (Fischer et al., 2022). However, in the absence of perfect choices, where youth may choose not to abstain, youth are still developing and learning how to make decisions; therefore, harm reduction offers supplementary principles and strategies available to mitigate harm and equip youth with the necessary tools to navigate situations involving drugs. By offering multiple avenues to reducing the negative effects of substance use, the harm reduction approach is accessible and inclusive for all students (Hathaway et al., 2011). Harm reduction drug education programs such as the School Health and Alcohol Harm Reduction Project (McKay et al., 2014), the Drug Education in

Victorian Schools (DEVS) programme (Midford et al., 2014) and School Counselors' Ideas for Drug Use Abatement (Poulin & Nicholson, 2005) have been implemented in school settings and have demonstrated success in fostering safer attitudes toward substance use and decreasing associated harms. Despite the recent legalization of cannabis in Canada and other jurisdictions throughout the United States, there remains a significant gap in existing cannabis education (Watson et al. 2019). Existing harm reduction programs that have seen success in substance use behaviours among youth may not reflect the status of cannabis as a legalized substance (Poulin & Nicholson, 2005), or are not implemented in North America (McKay et al., 2014; Midford et al., 2014)

With the legalization of cannabis in numerous jurisdictions and the increase in access to cannabis, youth drug education must reflect cannabis' classification as a regulated substance. Previous research has highlighted notable gaps in youths' knowledge of cannabis and the adverse consequences associated with cannabis consumption (George et al., 2015). Additionally, according to McKiernan and Fleming (2017), youth perceived cannabis effects as less impairing and easier to conceal compared to alcohol; consequently, driving under the influence of cannabis was seen as less risky. Youth also indicated that they were receiving minimal cannabis education at school and at home, and their limited knowledge of cannabis was inaccurate as it often came from their peers and social media (Bishop et al., 2022). Further, Canadian educators have reported that students are largely unaware of the harms of substance use, identifying an urgent need for evidence-based, harm reduction substance use education in schools (Downey et al., 2024). Addressing these gaps and offering current, evidence-based cannabis and overall drug education to youth is essential in promoting safer decision-making and minimizing potential harm associated with cannabis and other drugs.

A scoping review explored cannabis education resources in Canada (Howe et al., 2023). However, it was limited in that of all 60 items identified, only three programs were evaluated resources. While understanding resources available to the youth and the general public is beneficial, there is value in ensuring resources are evaluated and effective in their intended outcomes. Exploring evidence-informed programs, which are evaluated to ensure primary outcomes are met, is important for educators and policymakers to understand where to allocate resources to maximize the likelihood of positive outcomes.

Objective and Purpose

The Cannabis Health Evaluation and Research Partnership (CHERP) team is an interdisciplinary team of researchers at Memorial University of Newfoundland. Following cannabis legalization in Canada, the CHERP team conducted research to inform a substance use education strategy, using qualitative focus groups with youth and young adults (Bishop et al., 2022) and a quantitative survey with teachers (Downey et al., 2024); this research highlighted the need for cannabis education for youth (Howe et al., 2023) that is evidenced-based, accessible to all youth, interactive, and harm reduction focused. In response to the need for youth substance use education, the CHERP team developed a drug education strategy called Drug Education Centred on Youth Decision Empowerment (DECYDE; <https://decyde.ca/>) that addresses these needs by providing evidence-based, harm reduction, substance use education and resources for youth, educators and guardians. However, a scoping review of currently available education programs was necessary to inform this strategy. A scoping review will provide us with a broad overview of available resources, identify specific gaps in available programming, and capture the full landscape of available resources compared to other reviews (e.g., systematic reviews), which have more specific research questions and are used to explore the quality and rigour of the

programs. Given the broad gap in knowledge on available harm reduction programs; this scoping review aimed to identify existing literature on evaluated harm reduction substance use education programs directed toward school-aged youth that included cannabis as a component of the education.

Research Question

The following research question was explored: What evaluated, evidence-based, substance use harm reduction education programs with a cannabis component are identified in the literature for school-aged youth?

Methods

We conducted a scoping review using the methodological framework outlined by Arksey and O'Malley (2005) and recommendations outlined by Levac et al. (2010) to develop the review. The subsequent sections outline this framework.

Identifying Research Question

We explored the following research question: What evaluated, substance use harm reduction education programs are identified in the literature for school-aged youth?

Item Selection

Items were included in this review if: 1) the article was peer-reviewed; 2) the education program was delivered to youth ages 9 to 18 or in Grades 4 to 12; 3) the education program contained a cannabis component or topic; 4) the education program was evaluated; 5) the education program contained a minimum of two harm reduction components (Table 1); and 6) the education program was developed or offered in Canada or the United States. Although we initially intended only to include harm reduction programs, our initial search yielded a limited

number of harm reduction programs; therefore, we expanded our search strategy to include primary prevention programs, that included a minimum of two harm reduction principles.

Table 1.

Harm Reduction Principles Criteria for Inclusion

Harm Reduction Principles:

1. *Abstinence*
 2. *Recognizes that licit and illicit drug use is a part of our world*
 3. *Establishes quality of individual and community life and well-being*
 4. *Ensures that people with lived and living experiences are included in creating programs and policies*
 5. *Recognizes Socioeconomic disparities and intersectionality*
 6. *Understanding substance use is a spectrum of behaviours*
 7. *Calls for non-judgemental, non-coercive delivery and content*
 8. *Affirms people who consume substances are the primary agents of making substance use decisions.*
 9. *Does not attempt to minimize or ignore the consequences associated with substance use*
-

Note. Principles developed according to the National Harm Reduction Coalition (Harmreduction.org).

Identifying relevant resources

In consultation with a health science librarian (EAK), comprehensive search strategies were developed and run in Ovid MEDLINE; Embase via Embase.com; APA PsycInfo, ERIC, Academic Search Complete, and Social Work Abstracts all via EBSCO; and Scopus. The full search strategies can be found in Appendix 1. The initial MEDLINE search strategy was peer-reviewed by another health sciences librarian using the PRESS tool before translating to other databases (McGowan et al., 2016). We utilized Covidence (Covidence Systematic Review Software, 2022), a screening and data extraction tool, to review all items through two stages: title and abstract screening and full-text screening. Abstracts and full texts were viewed by the primary author and co-author (E.C.R and M.K.D). Any full-text articles that were deemed ineligible by both reviewers were removed and any inconsistencies were consulted and resolved by both reviewers.

Charting, Summarizing, and Reporting the Data

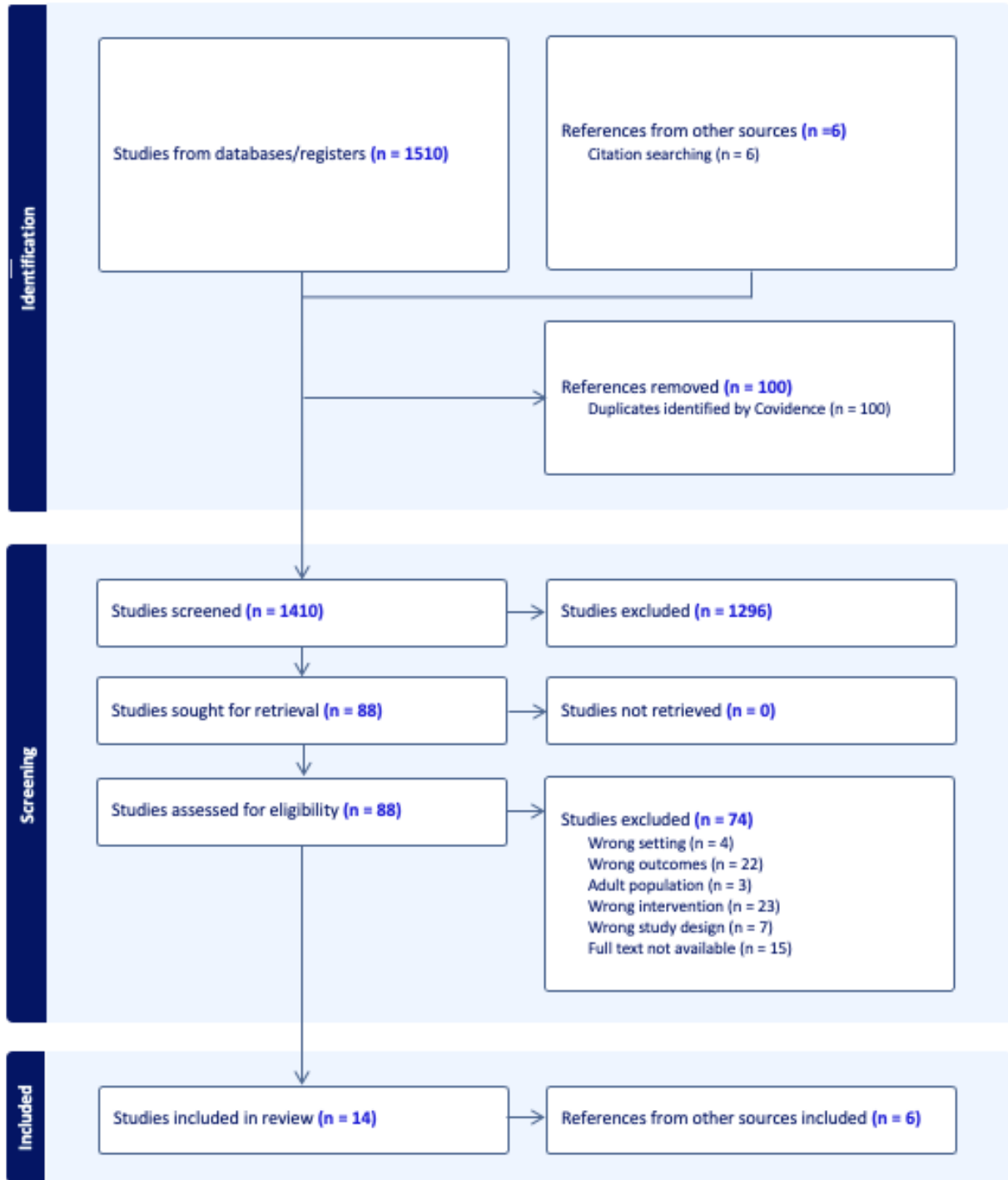
Two reviewers (E.C.R. & M.K.D.) independently extracted data using the agreed upon categories, including: 1) Program; 2) Participants; 3) Setting; 4) Intervention; 5) Outcomes; and 6) Measures. Any uncertainties or confusion related to the data extraction were resolved through discussion by ECR and MKD in consultation with the research team following an iterative process to ensure that inclusion and exclusion criteria were followed consistently throughout the review.

Results

An initial database search on July 21st, 2022, yielded 310 unique articles after 200 duplicates were removed. After screening the results from the initial search and finding a lack of harm reduction programs, the decision was made to run a second, broader search that would also retrieve articles discussing primary prevention programs. The second search was run on December 16th, 2022, and retrieved an additional 2,750 studies, of which 1,100 were unique. An additional six unique articles were identified by hand searching the article reference sections, giving a total of 3,266 articles identified and examined in this scoping review. Following title and abstract screening, 1,296 items were excluded. Eighty-eight articles underwent full-text review, and a further 74 articles were excluded (23 wrong interventions, 22 wrong outcomes, 15 full-text not available, 7 wrong study design, 4 wrong setting, 3 adult population). Finally, 14 programs were identified, and six unique articles were included, giving a total of 20 programs. The flow of articles throughout all stages of this scoping review is illustrated in this PRISMA diagram (Figure 1).

Figure 1.

PRISMA Flow chart of literature search review and inclusion process.



Program Characteristics

Of the 20 programs identified, two were implemented in Canada and 18 were in the United States (Table 2). Twelve publications (60%) occurred before cannabis legalization in Canada (2012 – 2017), while eight articles (40%) were published between 2018 and 2024. Regarding the program's delivery setting, 13 were school-based, one was family/home-based, one was community-based, and five programs had joint delivery settings: school and community ($n = 2$), school and home ($n = 2$) and school and clinic ($n = 1$). Two programs targeted elementary school-aged youth, six targeted middle school-aged youth, four targeted high-school-aged youth, three specifically targeted at-risk youth (i.e., homeless, truant youth), and five fell into the other category (i.e., Hawaiian youth, Native American). Although this scoping review aimed to review harm reduction programs (Table 3), the majority of the identified programs were classified as prevention programs ($n = 14$), and a limited number were listed as harm reduction ($n = 5$) or other ($n = 1$).

Table 2.

Program Characteristics

Author(s), year	Program	Locatio n	Setting	Sample
Asdigian et al., 2018	Circle of Life	USA	School	Youth in Grade 7-8 from American Indian reserve ($n = 635$; $M_{age} = 12.5$)
Bavarian et al., 2015	Take Charge of Your Life	USA	School	Youth in Grade 7 ($n = 10,028$; $M_{age} = 12.4$)
Botvin et al., 2015	Life Skills Training	USA	School	Youth in High school ($n = 452$; $M_{age} = 15.2$)
Brolin et al., 2022	SBIRT	USA	Community	At-risk youth ($n = 462$; $M_{age} = 19.2$)
D'Amico et al., 2012	Project CHOICE	USA	School	Youth in middle school ($n = 9528$; $M_{age} = 12.6$)
Dembo et al., 2016	Brief Interventions	USA	Home	Truant youth (11-15 years old), ($n = 200$; $M_{age} = 14.79$)

Exner-Corten et al., 2020	Healthy Relationships Plus	Canada	School/Community	Adolescents (14-18 years old), ($n = 212$; $M_{age} = 15.5$)
Hall et al., 2013	Too Good for Drugs	USA	School	Youth in Grade 6 (11-14 years old), ($n = 10,762$; $M_{age} = 11.3$)
Hecht et al., 2018	A) Keepin' it REAL	USA	School	Rural youth ($n = 2781$; $M_{age} = 14.7$)
Holleran et al., 2014	B) Keepin' it REAL	USA	School/Community	Alternative schools and at-risk youth ($n = 73$; $M_{age} = 16$)
Li et al., 2015	Positive Action Programme	USA	School	Youth in Elementary School ($n = 509$; $M_{age} = \text{not given}$)
Marsiglia et al., 2019a	A) Families Preparing the New Generation + Keepin' it REAL	USA	School / Home	Latino youth in middle school ($n = 532$; $M_{age} = 13$)
Marsiglia et al., 2019b	B) Families Preparing the New Generation + Keepin' it REAL	USA	School / Home	Latino youth in middle school ($n = 462$; $M_{age} = \text{not given}$)
Okamoto et al., 2019	Ho'ouana Pono Curriculum	USA	School	Hawaiian youth in Middle School ($n = 486$; $M_{age} = \text{not given}$)
Okamoto et al., 2016	Ho'ouana Pono Curriculum	USA	School	Hawaiian youth in Middle School ($n = 213$; $M_{age} = 11.7$)
Orsini et al., 2019	All Stars Senior	USA	School	Youth in High School ($n = 1547$; $M_{age} = \text{not given}$)
Spoth et al., 2016	Strengthening Families Program + Life Skills Training	USA	School	Youth in Grade 7 ($n = \text{not given}$; $M_{age} = \text{not given}$)
Wagner et al., 2014	Guided Self-Change	USA	School/Clinic	Youth in High School with a history of substance use/violent behaviour ($n = 514$; $M_{age} = 16.2$)
Wong et al., 2012	Project SOS	Canada	School	Youth in Grade 6-7 ($n = 114$; $M_{age} = 11.5$)
Workman et al., 2012	PALS	USA	School	Youth in Middle School ($n = 501$; $M_{age} = 11.6$)

Table 3.*Program Classification*

Author(s), year	Program	Type of Intervention/Program
Asdigian et al, 2018	Circle of Life	Prevention Program
Bavarian et al., 2015	Take Charge of Your Life	Prevention Program
Botvin et al., 2015	Life Skills Training	Prevention Program
Brolin et al., 2022	SBIRT	Harm Reduction Intervention
D'Amico et al., 2012	Project CHOICE	Harm Reduction Program
Dembo et al., 2016	Brief Interventions	Harm Reduction Intervention
Exner-Corten et al., 2020	Healthy Relationships Plus	Harm Reduction Program
Hall et al., 2013	Too Good for Drugs	Prevention Program
Hecht et al., 2018	A) Keepin' it REAL	Prevention Program
Holleran et al., 2014	B) Keepin' it REAL	Prevention Program
Li et al., 2015	Positive Action Programme	Social Emotional Learning Program
Marsiglia et al., 2019a	A) Families Preparing the New Generation + Keepin' it REAL	Prevention Program
Marsiglia et al., 2019b	B) Families Preparing the New Generation + Keepin' it REAL	Prevention Program
Okamoto et al., 2019	Ho'ouna Pono Curriculum	Prevention Program
Okamoto et al., 2016	Ho'ouna Pono Curriculum	Prevention Program
Orsini et al., 2019	All Stars Senior	Prevention Program
Spoth et al., 2016	Strengthening Families Program + Life Skills Training	Prevention Intervention
Wagner et al., 2014	Guided Self-Change	Harm Reduction
Wong et al., 2012	Project SOS	Prevention Program
Workman et al., 2012	PALS	Prevention Program

Program Outcome Evaluation

The primary outcomes of the intervention/program are listed in Table 4. Although the programs included met our criteria of containing two harm reduction principles, most programs' ($n = 19$) primary outcomes were related to substance use behaviours (i.e., reduction in frequency, reduction in risky behaviours, substance use initiation, etc.). Only one program explored substance use knowledge.

Table 4.*Program Description and Outcome*

Author(s), year	Program Description	Primary Outcome
Asdigian et al., 2018	Program aims to empower youth by fostering a sense of personal responsibility and building communication, decision-making, and peer resistance skills that discourage risky behaviours and promote a healthy lifestyle.	Reduce cannabis use
Bavarian et al., 2015	Intervention focused on challenging youth's normative attitudes towards substance use, highlighting the harms associated with substance use, and developing the skills needed to resist using substances.	Substance use behaviours among students (inclusive of cannabis)
Botvin et al., 2015	The 10-session program aims to teach personal and youth social skills to enhance knowledge, attitudes, norms and skills needed for substance use resistance.	Substance use behaviours
Brolin et al., 2022	After completing the Alcohol Use Disorder Identification Test (AUDIT), youth received a brief intervention where staff offered feedback regarding the youth's AUDIT score, shared potential risks to health and employment, assessed readiness for change, and used motivational interviewing techniques to help the youth set goals for change.	Risky substance use
D'Amico et al., 2012	An interactive program focused on fostering protective factors and reducing risk factors while targeting multiple substances. Sessions focus on normative feedback, challenging unrealistic beliefs about substance use, resisting social pressure to use substances, and highlighting the potential benefits of limiting substance use.	Initiation of alcohol use and past month use of alcohol
Dembo et al., 2016	A brief intervention session focused on youth's substance use and related consequences, their willingness to change, the benefits of change, and their goals. In a second session, the youth reviewed their progress, including obstacles and challenges, and discussed strategies for meeting their goals.	Reducing cannabis use
Exner-Corten et al., 2020	The intervention focuses on helping youth strengthen communication skills and reduce risky behaviours by building resistance skills. The program uses core elements from the Fourth R program but focuses more on the impact of mental health.	Positive mental health, bullying, victimization/perpetration, and substance misuse (alcohol, cannabis)
Hall et al., 2013	The curriculum has five components: goal setting, decision making, social bonding, managing emotions and strengthening communication skills. Sessions	Substance use behaviours and risk and protective outcomes.

	include small group activities, role-playing, interactive games, demonstrations and class discussions.	
Hecht et al., 2018	Keepin' it REAL is a drug prevention program targeting minority youth. It consists of 4 steps to drug resistance: refuse, explain, avoid and leave. Core aspects of the program involve developing interpersonal skills, drug resistance techniques, assertiveness, problem-solving, self-awareness and self-efficacy.	Substance use
Holleran et al., 2014	See above	Substance use behaviours (reduction)
Li et al., 2015	Program taught per grade by school teachers, addressing problem behaviours such as substance use, bullying and violence. The program focused on addressing various factors influencing behaviour, including school environment, peer relations, emotions and self-efficacy.	Substance use, serious-violence-related behaviour, and current bullying and disruptive behaviours
Marsiglia et al., 2019a	The Keepin' it REAL (KIR) curriculum aimed to increase drug resistance skills, promote anti-substance use norms and attitudes, and develop effective decision-making and communication skills for resisting drugs and alcohol. Families Preparing for the New Generation (FPBG) parent workshops covered topics about identifying support for families, practicing KIR, child development, communication, managing behaviours and talking about substances with child.	Substance use frequency
Marsiglia et al., 2019b	See above	Substance use behaviours
Okamoto et al., 2019	The intervention consists of classroom-based sessions focused on building substance resistance skills. The sessions are supplemented by videos vignettes presenting Hawaiian youth experiencing a variety of realistic drug-related scenarios, intended to facilitate learning and discussion. Each session includes a recap of the last session, a video, and several interactive activities, one of which involves Hawaiian culture and applies it to drug resistance.	Substance use behaviours
Okamoto et al., 2016	See above	Substance use behaviours
Orsini et al., 2019	The program aimed to challenge normative beliefs about substance use while highlighting the associated harms and promoting decision-making, stress management and drug resistance. The curriculum was	Substance use, problem behaviour and substance use associated with problem behaviour

	facilitated by teachers and included small group activities, games, discussions, and worksheets that encouraged students to apply their knowledge to real-world scenarios.	
Spoth et al., 2016	Life Skills Training (LST) was incorporated into the school curriculum and aimed to provide students with the knowledge and skills needed to avoid substance misuse. The intervention included interactive lessons, homework assignments and role-playing rehearsal of drug resistance and other interpersonal skills. The Strengthening Families Program (SFT) was for both parents and youth and aimed to enhance caregivers' parenting skills and youth's social and peer resistance skills.	Substance use
Wagner et al., 2014	The intervention consisted of one-on-one sessions with masters-level counsellors, which focused on reducing substance use and aggressive behaviours. Sessions included self-monitoring progress towards desired behavioural changes, guided goal setting, readings on high-risk situations, and motivational techniques for committing to change.	Substance use and aggressive behaviour
Wong et al., 2012	Sessions were led by four Western Hockey League players and a school liaison officer. The program frames WHL players as role models and promotes a zero-tolerance approach for substance use. The presentation aims to inform youth on types of illicit substances, their dangers and how to resist substance use.	Substance use knowledge
Workman et al., 2012	The program follows an interactive training model focusing on social influences on substance use and developing drug resistance skills. Specific skills taught include resisting peer pressure, identifying and avoiding environments where drugs may be used, managing stress and making choices that promote a healthy lifestyle.	Substance use intentions

Sixteen items used a quantitative approach and four used a mixed-method approach. The evaluation methods used included (Table 5): Randomized Control Trial (RCT) design ($n = 12$); Randomized Block design ($n = 2$), Pretest-Posttest design ($n = 3$); Quasi-Experimental Pretest-Posttest design ($n = 1$); Dynamic wait-list control group design ($n = 1$); and Random Assignment ($n = 1$). To evaluate the outcomes, most of the programs ($n = 17$) used a self-report measure, and

only three programs used a self-report measure coupled with either an observation on student engagement ($n = 1$), focus groups on perceptions of the program ($n = 1$), or qualitative responses on substance use knowledge and attitudes ($n = 1$).

Table 5.

Program Evaluation

Author(s), year	Study Design	Method of Evaluation	Measures
Asdigian et al., 2018	RCT	Quantitative	Authors developed a questionnaire on cannabis use
Bavarian et al., 2015	RCT	Quantitative	Authors developed a binary measure related to substance use and drug education
Botvin et al., 2015	Randomized Block	Quantitative	Questionnaire on frequency of substance use
Brolin et al., 2022	pretest-post-test	Quantitative	Questionnaire on past 30-day substance use
D'Amico et al., 2012	Cluster RCT	Quantitative	Questionnaire on frequency of alcohol use, and beliefs on alcohol
Dembo et al., 2016	RCT	Qualitative	Self-report questionnaire on cannabis use
Exner-Corten et al., 2020	RCT	Quantitative	Items on substance misuse taken from the Youth Risk Behavioral Surveillance Survey
Hall et al., 2013	RCT	Quantitative	Student Behavior and Risk and Protective Factor Survey
Hecht et al., 2018	RCT	Mixed	Observations on students' engagement and attentiveness and self-report questionnaire on substance use
Holleran et al., 2014	Quasi-experimental pretest posttest design	Mixed	Questionnaire on substance use consumption and intentions and Focus groups with youth on their perceptions of the program
Li et al., 2015	matched pair RCT	Quantitative	Frequency of Delinquent Behavior Scale (Dunford & Elliott, 1984). also asked questions "Have you ever...smoked a cigarette/ drank alcohol/ gotten drunk/ used marijuana". responses included 1(no), 2(yes, once) to 4(yes, more than 5 times)
Marsiglia et al., 2019a	Cluster RCT	Quantitative	Self-report questionnaire on substance use

Marsiglia et al., 2019b	Cluster RCT	Quantitative	Self-report questionnaire on substance use, substance use norms, expectancies, resistance skills and intentions.
Okamoto et al., 2019	Dynamic wait-list control group design	Quantitative	Questionnaire on risk and protective factors, substance use frequency, drug resistance strategies, and risk assessment
Okamoto et al., 2016	Random assignment	Quantitative	Questionnaire on risk and protective factors, drug use frequency, drug resistance strategies, and risk assessment.
Orsini et al., 2019	stratified RCT	Quantitative	Self-report questionnaire on substance use, risky alcohol use
Spoth et al., 2016	Randomized Block	Quantitative	Questionnaire on gateway substance initiation and substance use frequency
Wagner et al., 2014	RCT	Quantitative	Timeline Follow-Back to assess past month substance use
Wong et al., 2012	pretest-posttest	Mixed	Closed and open-ended items assessing knowledge about the effects of alcohol, cigarettes, and illicit drugs, why people use drugs, and attitudes toward drug use.
Workman et al., 2012	pretest-posttest	Quantitative	Questionnaire modeled after the National Household Drug Use Survey

Discussion

This scoping review captured literature on what is known about evaluated substance use, harm reduction, and education programs for school-aged youth, which contain a cannabis component. From the 20 included studies, several gaps were identified. There was a gap in Canadian programming, with the majority implemented in the United States. Although most programs were implemented at the school level, few were targeted toward elementary-age youth. There were no evaluated, comprehensive programs identified, suggesting the need for comprehensive programs that aim to reduce substance use-related harm among youth and increase knowledge. We considered comprehensive substance use programs to be one that incorporate multiple components and outcome measures. Specifically, these programs do not

solely focus on abstinence but also evaluate the effectiveness of the programs in promoting safe behaviours and addressing mental health.

Ham Reduction vs. Prevention

While this scoping review explored programs that contained a minimum of two harm reduction principles, most programs were prevention-based. Despite the popularity of prevention-based messaging and education, research supporting the efficacy of these programs in deterring youth substance use is limited (Watson et al., 2019; West & O’Neil, 2004). It is important to note that a key principle of harm reduction drug education principles is presenting abstinence as the safest option (Fisher et al., 2022; Paradis et al., 2023; Selby et al., 2021). Harm reduction guidelines, such as the lower-risk cannabis (Fisher et al., 2022), alcohol (Paradis et al., 2023), and nicotine guidelines (Selby et al., 2021), recognize that there is no universally safe consumption of cannabis, tobacco/nicotine, or alcohol, and the only way to avoid any risk is abstinence, which must be considered when developing and implementing harm reduction programs. In comparison, abstinence-based programs often fail to provide youth with tools and strategies to minimize harm in situations where they do not abstain. Midford (2010) highlighted that prevention programs should recognize the attractiveness of substance use to young people and that strategies solely based on abstinence and drug refusal may be counterproductive in their goals. Harm reduction principles hold more realistic and measurable goals and outcomes, focusing on increasing knowledge, developing skills and reducing harm rather than cessation of substance use when evaluating these programs.

Evaluating Program Outcomes and Identifying Gaps

This scoping review included only programs that had been evaluated. Another previously published scoping review explored all cannabis education resources (Howe et al., 2023), and

only 2 of their 60 identified resources overlap as those were the only evaluated resources (Exner-Corten et al., 2020; Wong et al., 2012). The current review identified all programs evaluated in the United States, outside of two implemented in Canada, since 2010 (Exner-Corten et al., 2020; Wong et al., 2012), which allowed for a more comprehensive understanding of available drug education resources for youth. Program evaluation is pivotal in shaping and adjusting public policies and is incredibly important in government funding allocation. Substantial resources have been misdirected into implementing school-based drug education programs that are ineffective (Brown, 2001). Conducting thorough program evaluations is essential to help ensure that resources are being allocated effectively and that programs address specific needs in the community, yield positive results, properly educate youth, and reduce harm.

When measuring outcomes, almost all programs identified in this scoping review used self-reported measures. Studies have highlighted the limitations of self-report measures with youth (Teye & Peaslee, 2015), and others have stressed caution when relying on self-reports to assess mental health and behavioural challenges (Broberg, 2001). Only two programs in our review measured factors other than youths' substance use reduction or behaviours; instead, these programs measured knowledge and factors influencing attitudes (Wong et al., 2012) and behaviours and perceptions related to substance use (Clark et al., 2011). Measuring factors beyond cessation or reduction in substance use behaviours among youth is essential to gain a comprehensive understanding of program effectiveness. The World Health Organization European Working Group on Health Promotion Evaluation (1998; Moon, 2000) identified four key principles for evaluating health promotion initiatives: 1) active participation with stakeholders, 2) using multiple methods to evaluate program effectiveness; 3) enhancing capacity by highlighting the role of evaluations in addressing health promotion concerns; and 4)

recognizing the complexity of health promotion interventions and their long-term impact. Developing and implementing comprehensive evaluation strategies are critical for ensuring interventions are effective in achieving their intended outcomes and relevant to communities and stakeholders, improvement areas can be identified, resource allocation is optimized, and the intervention is sustainable.

Further, most programs in this review were conducted before 2018, and therefore do not reflect the current status of cannabis legalization in Canada. However, youth qualitative work post-legalization highlighted a need for cannabis education that is evidence-based, implemented early, and follows a harm reduction approach (Bishop et al., 2022). The current review revealed only two programs targeted toward elementary school-aged youth. Early interventions in youth drug education are crucial in preventing and mitigating substance use harms. Implementing drug education in early school years is needed as it is influential in shaping youths' behaviours and attitudes can be more influential on youths' behaviours and attitudes (Lloyd et al., 2000). This is particularly important given that a considerable proportion of Canadian students (grades 7-12) have reported experimenting with illicit substances (Leatherdale, 2012).

Limitations and Future Directions

The current review has several limitations. First, we focused on harm reduction drug education programs in Canada and the United States which limits our awareness of programs implemented in other countries. Moreover, we included programs developed before cannabis legalization in Canada and other jurisdictions in the United States, potentially leading to content that does not reflect the current status of cannabis legalization and may focus on pre-legalization attitudes. Although our focus was on including harm reduction as part of the program, the

majority of programs included in this review were prevention programs, which did not solely focus on harm reduction.

Future research should explore the quality and rigour of the programs to provide a clearer understanding of their efficacy. There is also a need to conduct program evaluations and develop accurate assessment tools for youth beyond self-report measures. Emphasizing the importance of rigorous, evidence-based drug education development and evaluation is critical for promoting youth health.

Conclusion

The findings of our scoping review highlighted a limited number of evaluated harm-reduction programs in Canada and the United States that may be effective in reducing and educating youth on substance use-related harms. With the legalization of cannabis in many jurisdictions, few programs exist that provide evidence-based, harm reduction education for youth. Knowledge gained from this scoping review will support developing and evaluating a drug education strategy that incorporates harm-reduction principles for school-aged youth.

Chapter 3: Manuscript 2 -

Voices of Educators: Exploring Educators' Perspectives of Substance Use Education

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Abstract

Background: Despite the increase in youth substance use, drug education and methods to implement effective strategies targeting youth remain limited. The purpose of this study was to gain a better understanding of educators' perspectives on substance use-related issues and to explore strategies for delivering and assessing effective drug education strategies to best support students' substance use health literacy.

Methods: A qualitative study using focus groups and semi-structured interview questions was conducted with educators in Newfoundland and Labrador. Deductive thematic analysis using the social-ecological model of health literacy framework guided analysis.

Results: Five focus groups ($n = 26$) were conducted. Findings highlighted the challenges educators are facing in schools and their communities with youth substance use and the need for harm reduction education that is up-to-date, culturally sensitive, interactive, age-appropriate, easily accessible, cross-curricular, engages parents and the community, and effectively assesses students' learning by employing multiple evaluation methods.

Conclusion: The findings from this work will support the development, implementation, and evaluation of drug education that is receptive to and supported by educators and youth.

Keywords: Substance use, Education, Educators, Youth, Qualitative, Canada

Introduction

Youths' engagement in substance use and associated behaviours (e.g., driving under the influence, polysubstance use, binge drinking) is a risk factor resulting in psychological, physical, and social consequences (Conway et al., 2018; Hall et al., 2020; Newcomb & Bentler, 1987). The Canadian Public Health Officers (2018) noted that between 2016 and 2017, 40% of students (grade 7-12) reported consuming alcohol, 25% engaged in high-risk drinking behaviour, and 20% used cannabis; further, opioid-related hospitalizations have almost doubled between 2010 (7.1 per 100,000) and 2016 (12.4 per 100,000). Youth report using substances for a variety of reasons and are influenced by a range of factors, including socialization (Segal, 1996), peer pressure (Foster & Spencer, 2013), coping with emotions (George & Vaccarino, 2015), and ignorance about the adverse consequences (Guillén & Nascimento, 2010).

Research demonstrates evident gaps in youths' substance use knowledge, particularly regarding cannabis. Leo-Toro (2020) found that Canadian youth are unaware of the health effects of cannabis use and receive limited exposure to public health messaging. In a qualitative study (Donnan et al., 2022), youth expressed misconceptions about driving under the influence of cannabis (DUIC) and underappreciated the risks associated with DUIC. Further, Bishop et al. (2022) identified that youth are not receptive to current abstinence-based drug education strategies, which research also suggests are ineffective (Porath-Waller et al., 2013; Slemon et al., 2019). Watson et al. (2019) emphasized the need for balanced, evidence-based cannabis education that does not rely on traditional risk-based messaging.

Midford (2010) highlighted elements of effective drug education strategies. They suggest that a *supportive school and community environment* is critical, as school connectedness - the extent to which students feel accepted, included and supported – is a protective factor, protecting

youth from health risks, early initiation of drug use, and is associated with lower rates of drug use (Public Health Report, 2018). Further, prevention programmes are often counterproductive, as expecting youth to abstain from regulated, normalized drugs (i.e., alcohol, cannabis, nicotine) is unrealistic (Bishop et al., 2022; Midford, 2010) and contributes to stigma (Meehan, 2017). Instead, programmes should focus on *setting realistic goals and outcome measures for meaningful evaluations*, which involve reducing harm for youth who choose not to abstain while still including abstinence as a key component. Incorporating and assessing skills-based health education – education focused on teaching youth practical skills relevant to real-life situations - into substance use education programs can equip youth with the necessary tools to make informed substance use decisions that mitigate potential harm. *Engaging young people* (Midford, 2010) is key in developing and implementing drug education strategies. Bishop et al. (2022) demonstrated that youth desire a say in their drug education, expressing a need for evidence-informed interactive harm reduction education.

My research team, the Cannabis Health Evaluation and Research Partnership (CHERP) team conducted a needs assessment, qualitative (Bishop et al., 2022) and quantitative (Downey et al., 2024; Howe et al., 2023) research identifying a need for drug education in Newfoundland and Labrador (NL). We conducted a scoping review of cannabis education resources in Canada that revealed limited evaluated resources and raised concerns about self-selection bias involved in selecting resources (Howe et al., 2023). Further, a survey conducted by our team explored educators' perspectives on drug education, which identified that many felt unprepared to educate youth on substance use and expressed a need for drug education resources (Downey et al., 2024). We are also developing, implementing and evaluating the Drug Education Centred on Youth Decision Empowerment (DECYDE; decyde.ca) strategy – an evidence-based, harm reduction

drug education strategy aimed to empower youth to make safe and informed choices regarding their substance use health. Recognizing the pivotal role educators play in shaping substance use attitudes and behaviours, it is crucial to gather valuable insights on the DECYDE strategy. Understanding educators' perspectives on the delivery of drug education, and youths' gaps in substance use knowledge can inform drug education strategies, ensuring they are tailored to best meet student needs.

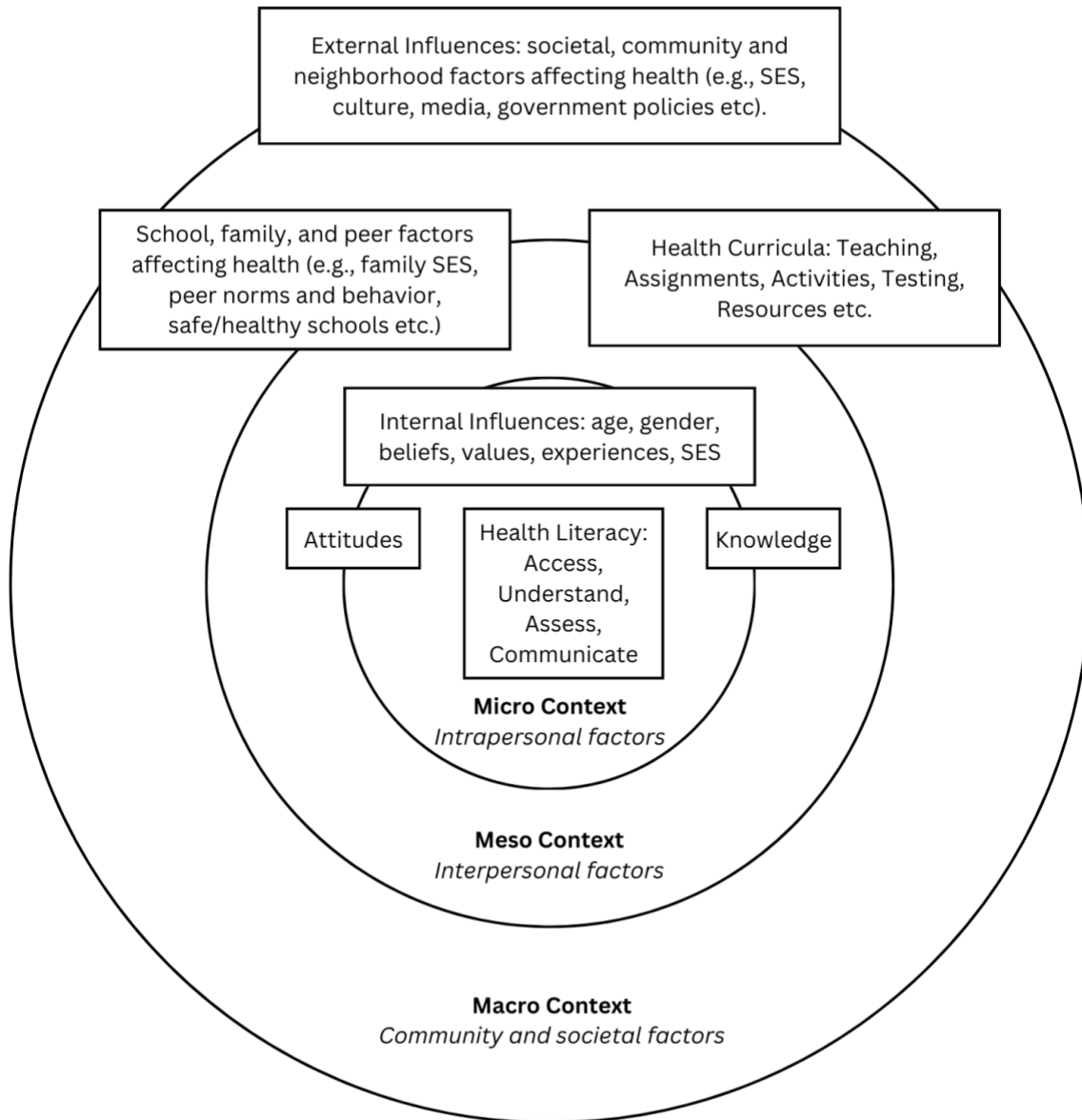
Social-Ecological Model of Health Literacy and the Current Study

The Higgins et al. (2009) social-ecological model of adolescent health literacy is a comprehensive framework for understanding the bidirectional relationship between intrapersonal, interpersonal, social and community factors predicting youth health knowledge and behaviours. The social-ecological model of adolescent health literacy (Higgins et al., 2009) is beneficial for the current study as it provides a useful lens and structured approach to organizing and interpreting educators' perspectives on the multiple layers influencing students' substance use health literacy. Using this model ensures the study has a holistic view of the factors that educators consider when discussing substance use education. Specifically, this framework was employed to analyze educators' perspectives on how these factors influence student's ability to find, understand, and use information related to substance use, which is crucial for developing effective educational strategies. Understanding youth's health literacy – how they find, understand, and use information and services to inform their decisions and behaviours (Healthy People 2030, n.d) – and factors that influence their health literacy (i.e., intrapersonal, interpersonal, social and community), is essential for developing comprehensive substance use education. Specifically, education that prioritizes skills-based health education (World Health Organization, 2003) – the development of psychosocial and interpersonal skills –

enables youth to apply knowledge and skills gained from school health curricula and to real-world situations. The purpose of this study was to gain a better understanding of educators' perspectives on substance use-related issues and to explore strategies for delivering and assessing effective drug education to best support students' substance use health literacy. The objectives are to 1) explore educators' perspectives on students' experiences with substance use; 2) explore educators' perspectives on delivering substance use education in the classroom; and 3) explore educators' perspectives on appropriate methods to assess students' skills-based health learning. While the focus groups addressed additional topics such as professional development (see Appendix), this paper concentrates on the classroom related objectives to help inform the DECYDE strategy.

Figure 1.

Overview of the Higgins et al. (2009) Social Ecological Model of Adolescent Health Literacy



Methods

Study Design

This qualitative study used a series of virtual focus groups (FG). In total, five FGs were completed between July and August 2023. Participants were grouped into FGs according to common focus areas (i.e., one elementary FG, one middle school FG, one high school FG, and two administrator FGs). Ethics approval was granted by the Interdisciplinary Committee on Ethics in Human Research: ICEHR #20230513-PH.

Recruitment of Participants

Teachers from across NL were recruited using a targeted recruitment strategy across genders, ages, experiences, school size, and geographical locations (e.g., urban and rural). We shared recruitment posters on social media pages targeting NL teachers. Recruitment continued until we reached saturation where new data repeated what was previously expressed (Saunders et al., 2018). Educators were eligible to participate if they: a) were an educator in NL and b) had direct contact with students in grades 4-12 at any point since the 2018-2019 school year. Prior to the FG participants were asked to familiarize themselves with the DECYDE strategy by reviewing the website (decyde.ca) and an infographic on DECYDE. Participants completed a demographic survey and consent form before the FG. All participants were provided with a \$100 gift card.

Data Collection

FGs were conducted online via Zoom. At the start of the 2-hour FG, participants were given a short, 10-minute presentation on the DECYDE strategy to ensure they had a clear, consistent understanding of the DECYDE program before giving constructive feedback and discussing their potential role, implementation and impact. While the presentation provided

necessary context, we aimed to minimize any potential bias by fostering an open environment for honest and constructive feedback. The presentation was followed by two discussion sections separated by a break. Five FGs occurred that had six to seven educators per FG. Each FG was led by two facilitators. Facilitators followed a semi-structured interview guide (see Appendix). Our research team developed questions to explore educators: 1) experiences with student substance use; 2) perspectives toward delivering substance use education; 3) professional development needs in preparation for delivering substance use education to students; and perspectives on effective evaluation methods and limitations to evaluating skill-based learning among students. Questions from the interview guide were entered in the Zoom chat forum to promote accessibility and each FG was recorded.

Research Positionality

The research team was a gender-balanced, culturally diverse group of educators and healthcare researchers involved in the development of the DECYDE strategy. My (Emily Rowe) role within this team, specifically for data collection (i.e., focus groups) was to develop the interview guide through discussion with my co-authors, organize focus groups, meet with facilitators to ensure they are well prepared to facilitate non-judgemental and unbiased discussions, and co-facilitate the sessions. The facilitator included a healthcare research trainee (e.g., psychology, pharmacy) and an educator involved in developing the DECYDE content, which was intentional, aiming to blend clinical and educational perspectives. Facilitators are healthcare research trainees, and a part of their education is to ensure they are non-judgemental and neutral when working with others. However, we recognize that it is challenging to remain completely non-judgemental and neutral given our inherent biases as we see the benefits of and the need for harm reduction education. Prior to the focus groups facilitators met to have open

discussion and ensure we were using, neutral and non-judgmental language, are skilled in guiding discussions and managing group dynamics, and knowledgeable on the project, facilitation guide, and prompts (Dilshad & Latif, 2013; Katz-Buonincontro, 2022). Facilitators had experience working with educators and individuals who consume substances and are knowledgeable on substance use consumption risks and substance use education in the province. We recognize our positionality - as white, healthcare professionals, educators and researchers – shapes our approach to qualitative research, where our personal experiences inherently influence our interactions and interpretations of participant narratives.

Thematic Analysis

A deductive thematic analysis approach (Azungah, 2018; Pearse, 2019) guided by the Higgins et al. (2009) Social-ecological model of adolescent health literacy framework was used to guide the analysis. Each FG recording was processed through automated transcription software (NVivo). B.T. and M.K.D. deidentified and verified each transcript line-by-line. The research team became familiar with the data by reviewing transcripts and recording reflexive notes and impressions of the data. E.C.R and B.T. coded the data according to the coding book developed in line with the Higgins et al. (2009) framework. Transcripts were coded based on the macro and meso contexts of the framework. The macro context is the outermost ring and recognizes the influence of community, environmental and structural factors on youths' health literacy. The meso context acknowledges interpersonal factors, including social support and others' influence (e.g., peers and family), health education programs, activities, curricula, and assessments on youths' health literacy. Given that we explored health literacy through educators' perspectives we did not include the micro context (see limitations). Four transcripts were analyzed twice to establish consistency between the coders. After all transcripts were coded, the

research team consulted on the framework, and interpretation of the codes. Based on the codes the research team discussed the presentation of the data to (results section) further understand educators’ experiences with, and perspective on, delivering drug education.

The results section outlines demographic data as well as the themes and sub-themes that were identified, including some examples of supporting quotes. Some quotes have been edited for clarity. Participant identification (PID) was included after the quotes based on self-reported gender [i.e., woman (F), man (M), non-binary (NB)] and location of residence [i.e., urban (U), rural (R), or small rural (SR)] (e.g., PID#52UW: Participant ID (PID) # 52 is a woman from an urban area).

Results

Participant Characteristics

Participants ($n = 26$) demographics were diverse with respect to geography, years of experience, role in the classroom, and school size (Table 1).

Table 1.

Summary of educator characteristics

Demographic variable	N (%)
Primary teaching position	
Classroom teacher	4 (15.4)
Instructional resource teacher	3 (11.5)
Principal/vice principal	5 (19.2)
Guidance Counsellor	2 (7.7)
Classroom teacher and Administrator	7 (26.9)
Classroom teacher and Speciality teacher	3 (11.5)
Classroom teacher and Instructional resource teacher	2 (7.7)
Employment status	
Permanent	26 (100)
Age group	
50-59	5 (19.2)
40-49	8 (30.8)
30-39	12 (46.2)
25-29	1 (3.8)

Demographic variable	N (%)
Gender	
Woman	16 (61.5)
Man	8 (30.8)
Non-Binary	2 (7.7)
Years of teaching experience	
21+	8 (30.8)
16-20	4 (15.4)
11-15	6 (23.1)
6-10	7 (26.9)
0-5	1 (3.8)
Primary teaching language	
English	21 (80.8)
Both French and English	2 (7.7)
French	3 (11.5)
Community size	
Over 15,000	12 (46.2)
5000-15,000	4 (38.5)
Under 5000	10 (38.5)
Number of students in school	
Over 600	5 (19.2)
451-600	5 (19.2)
301-450	6 (23.1)
151-300	3 (11.5)
51-150	7 (26.9)

Note. Educators in our study often had multiple primary teaching positions, especially those working in rural communities.

Theme 1: Societal and community-level influences

There were several societal and community-level influences that aligned with macro dimension of the Higgins et al. (2009) framework. Educators discussed the sizable substance use issues occurring in schools across the province. They emphasized that students have easier access to substances but limited access to substance use education. Environmental influences, including community, media, and homes were also noted as contributing to youth substance use knowledge and behaviours.

a) Access to Substances

Educators highlighted that youth substance use is a prominent concern within schools, and this problem has increased within the last school year.

“We have a sizeable drug issue in our school, both selling, using, and, I guess, mulling. We’ve always dealt with drugs at our school, but this past year has been eye-opening. And the fact that, it’s cocaine, it’s the big leagues. I think we’ve seen everything in our school this year except for crystal meth. It’s a really scary, scary situation in my school.” – PID #60RW

b) Systemic Access to Education

Educators suggested that with students having more access to a larger variety of substances, the education youth are receiving is not up to date with the changing nature of substance use.

“There’s definitely more availability. And I think our education is not keeping up with the drugs that are coming out as well.” – PID #52UW

Further, educators stated that drug education is not universally accessible to all youth and varies based on geographic region.

“I love the idea of the D.A.R.E. program. We used to do it in our school, but it hasn’t been offered for about ten years because we’re rural Newfoundland, and there’s no police in our community anymore. Now it’s just what we have in our health curriculum, and it’s very limited” – PID #27SRW

In addition to the need for student resources, educators expressed a need for resources themselves. They were eager to address this substance use problem within schools and figure out solutions.

“...we have all kinds of time for professional development. So this could be an area where I think teachers will say, we have a problem here, so let’s do something about this.” – PID #82SRM

c) External Influences on Youth

Educators highlighted that youth are receiving messages about drugs at home, in the community and through social media, which influence their attitudes and behaviours. As this teacher noted,

“I feel like one of the harder things to deal with is that they’re so influenced by outside sources that one teacher saying, ‘Oh, these are the facts,’ doesn’t weigh a lot in their

lives when they—you know, the videos they are watching, and the music they are listening to, and those things—like every generation has been saying that.” – PID #17RW

The influence of social media was noted as playing a big role in youth perception of drugs, as well as increasing their exposure to drug messaging.

“They hear it on social media. There's a lot of stuff being shared in even music that they listen to; they're talking about different drugs and so on.” – PID #02SRW

Theme 2: Health Curricula

The Higgins et al. (2009) framework acknowledged the influences on students' health literacy which plays out through health education curricula. This aligns with the following meso dimensions that educators discussed: a) drug education delivery, b) drug education content, and c) drug education assessment.

a) Drug Education Delivery and Teaching

There were several components of drug education delivery that were discussed by the educators, including universal access, age-appropriate and easy access, cross-curricular, and family and community involvement.

i) Integration and Accessibility of Drug Education

Participants stated that drug education and messaging is not equally accessible to all youth. One educator raised concerns that the students receiving drug messages and attention from administrators are often those already engaging in risky substance use behaviours. Educators felt that being proactive in targeting at-risk students was important, while also ensuring all students received such education.

“Bring it into the curriculum so that everybody's getting the same message. Because right now, the only kids I deal with are kids that are getting caught with it. We need to get the kids that are being tempted by those kids, and try and educate them that there are implications and there are harms that can come from whatever substance these kids are trying.” – PID #34SRW

Students have varying needs; therefore, educators highlighted the importance of universal drug education content that is accessible and easy for educators to adapt.

“...providing things in various forms, various ways to access it, the most accessible thing. ... accessibility for our students that have trouble reading or have trouble writing, making sure to say worksheets are available digitally as well for students to be able to type in” – PID #52UW

ii) Age-appropriate and easy access

Educators pointed out that younger students were being exposed to substances, such as through interactions with older youth, suggesting that drug education should be implemented early.

“I think the earlier the better. Again, you don't need to be talking about heroin in grade 4, ... but vaping and things like that. But even at the junior high level, everything is trickling down now. it's no problem for a kid in grade seven to hang around with a kid in grade eleven.” – PID #56RM

In addition, educators highlighted that education should be age-appropriate while still being comprehensive.

“From a trauma-informed lens, there are students as young as grade two, three, four that experience [substance use problems] in their home environments. So, when developing a comprehensive program, perhaps there should be an age-appropriate way to introduce that to our most at-risk students...we can't avoid those topics because we really need to teach those students how to identify these drugs, what they are, what the effects are.” – PID #30UW

iii) Cross-Curricular

Educators expressed concern with the limited time allotted for health education and suggested implementing drug education through a cross-curricular approach to ensure there is appropriate time to address substance use with students.

“The amount of time allocated to teaching health is very small. Cross-curricular is key and the current curriculum doesn't lend itself to this.” - PID#11UNB

iv) Encouraging family and community involvement

Educators emphasized the importance of having guardians and caregivers involved in substance use education. One option proposed by educators was to assign homework for students to discuss with their guardians.

“As you know, we've moved away from homework. But that's where that disconnect is with parents because, ‘oh, my kid doesn't have homework anymore.’ So parents are disengaged with the education. ... You need to have a conversation with your parents at least and bring it to class the next day.” – PID #03UW

b) Drug Education Content and Resources

Educators also shared ideas on the content they felt should be included in drug education.

i) Up-to date resources

Participants noted that the current health curriculum and resources are outdated: *“Our health curriculum in grades 7,8,9 is the same textbook that I used when I went through in the late 90s.”*

– PID #25UM. Some participants also expressed frustration with their current resources as they are outdated and do not reflect the current status of cannabis legalization.

“...a lot of the curriculum documents don't have this stuff in it because it's so outdated. Like marijuana is legal now here, so that should be incorporated into the curriculum somehow.– PID #66SRW

ii) Harm reduction approaches

Educators stressed that to educate youth effectively, we first need to acknowledge that students are using substances; therefore, they need to be equipped with tools and information to make safe and informed choices by using harm reduction drug education approaches.

“Harm reduction, definitely, because it's like safe sex. The message of abstinence, sure, you can preach that to people, and some are going to be okay with that. And some parents would love you to only speak to that. But I think kids need to be armed with facts and need to be told. ... So, I think a big piece of this is education, and they need to be on board with saying, ‘Yeah, there is an issue.’” – PID #80SRM

There was a consensus that current abstinence-based strategies are not effective, and drug education should follow a harm reduction approach. *“But again, I think from a harm reduction*

standpoint like you guys are trying to tackle here, I think the earlier, the better. It's not like they're not going to find out about it." – PID #56RM. Educators expressed difficulty in creating relationships with students where students feel comfortable having non-judgemental conversations about drugs. One participant explained that teaching through an abstinence-based approach and using anti-drug messaging is much easier than creating a safe space for youth to learn.

"Not everyone can go in and have that conversation. I guess anybody can go in and click slides, power points and, 'Here kids,' you know, 'drugs are bad, don't do drugs' and 'you know, if you do [use substances], you're a horrible person'. That message is gone; that was back in the 90s. And kids need someone who's going to be real with them, someone who's going to give that non-judgmental listening, who's going to be empathetic with them and meet them where they are." – PID #80SRM

iii) Diverse and culturally sensitive content

Participants emphasized the importance of ensuring that drug education content is diverse and culturally sensitive and adapted to our target population.

"I was not someone who ever taught in Labrador or in Indigenous communities, but I have a lot of friends who have. And discussions around substances and addiction are going to be a lot different there—and they should be—than they would be, say, in the metro area. Just that kind of sensitivity towards the intergenerational reach of addiction." – PID #11UNB

Others emphasized the importance of including drug education content around different cultural practices.

"Indigenous content. We had a smudge with a group last spring. They were confused by the use of tobacco. I think it would be an unfortunate omission, not to mention a traditional use of plants, medicines and substances by Indigenous peoples." - PID #11UNB

iv) Interactive activities

All participants agreed that for drug education to be effective and for it to be receptive to youth, it must be interactive.

“Kids start tuning out slideshows. They want interactive things they can do. So, playing a little game or anything technology-based, I think, will be super valuable. Because health [class] to them, whether it's treated as a one-off period. It's still a time when they look forward to a brain break.” – PID #69SRW

Others suggested bringing in relatable guest speakers with lived and living experiences.

“I think, you know, having guest speakers come in who share their experiences makes it real for students.”- PID #78UW

Educators highlighted the importance of equipping youth with decision-making tools and felt that discussions would be incredibly valuable.

“Yeah, I like the thing of having a decision-making model because I find, in high school anyway, you can't just preach at them. You've kind of got to have a conversation and teach them without them knowing you're teaching them. Because obviously as an adult talking to a teenager, if you tell them to do something, they're probably not going to do it. But if you just have a conversation with them, maybe if they're in that scenario and they think back like, 'oh, okay, I remember when Miss said this,' maybe they're more likely to take what you say and apply it.” – PID #66SRW

Additionally, educators proposed solutions to discussion-based activities aimed at enhancing youths' comfort in sharing their experiences.

“I've found that in the past, a question box worked great. But a lot of the times more recently, I find kids will just come out with the questions that they have and the experience that they have, and they are eager to share.” – PID #24UNB

Another suggestion was having talking circles, which can create a safe space for students to share.

“I think talking circles could work well in this kind of situation as well, because nobody can monopolize the whole conversation, which sometimes can happen. It gives everybody an opportunity to share in a safe setting with, you know, rules upfront. And also, you have the opportunity to pass if you're not comfortable speaking at that time. -PID #02SRW

c) Student Assessment in Substance Use Education

The assessment of substance use education programs and assessment of students' learning was another relevant sub-theme in the meso context. This was further characterized by the ambivalence around drug education outcomes and student's choice of assessment methods.

i) *Ambivalence around assessing substance use education outcomes*

When asking educators about how they assess substance use education in the classroom, many expressed uncertainties about how to evaluate the effectiveness of their teaching in real time. A central theme emerged regarding whether educators are assessing if youth are getting the information or if it is having a positive lasting impact and changing behaviours. Educators recognized the difficulty of assessing these longer-term outcomes within the scope of classroom-based evaluations, which are typically designed to gauge immediate understanding rather than behavior change over time. Their insights highlight the interconnected nature of short-term and long-term impacts.

“What I'm wondering is, what metrics are you trying to evaluate? Whether they have the information you provided, or whether that information had an impact? I mean, they can learn it all and then just turn around and say, ‘well, I'm going to do it anyway.’ I don't think you would see an immediate big decline in [drug use], especially if we're looking at grade fours, you're probably not going to even see an effect for 4 to 5 years, just to see if some of those lessons took hold, because that's the age at which they start to get involved with that kind of thing.” – PID #27SRW

Moreover, educators highlighted that drug education interventions are not going to see an immediate impact and despite that, it is still important for the information to be available to youth.

“I don't know if you put a metric on this right now. I don't know if I can go and say to a kid, well, you get 90 on this drug information session. You get 60 on it or—I don't think it needs that metric, I think the kids need the information, and the engagement. I'm less concerned about evaluating it and putting a mark on it, as I am the involvement of the kids in it. ... But there's no way to measure the impact of that, until you start looking at rates after. ... There's a latency in that. From when you deliver it to when you see the effects later, they won't be immediate.” – PID #80SRM

Similarly, educators expressed that assessing whether students are meeting curriculum outcomes is not their concern; instead, they believe implementing that information is more important and stressed a need for drug education resources for youth.

“I think from an assessment standpoint, the vast majority of teachers aren't going to care so much about assessing those outcomes as opposed to delivering information.” – PID #56RM

Comparatively, other educators indicated that their primary objective would be to assess curriculum outcomes they are expected to teach students, which demonstrates a sense of limitation in assessing how students apply acquired knowledge in real-world contexts.

“I do hope my education is impacting them, but our job as educators is to evaluate their understanding what we're teaching. We're not understanding how they use that information. We're not evaluating how they use that information.”- PID #74SRW

Participants acknowledged there needs to be a shift from students' ability to excel in assessments to applying that knowledge and skills from harm reduction education in real life.

“Our kids can write every assessment and do every project and, you know, they know in theory what the right answers are to how to behave in society. Effectiveness in assessment, it needs to be application in real life. And that's where, you know, we struggle as educators because like I said, they can write, you know, nothing like a good test. They know the answers.” – PID #03UW

ii) Student choice in assessment methods

Educators noted that there is a shift towards Universal Design for Learning (UDL), which underscores the idea of meeting students where they are and adapting education delivery to their needs. They explained that when evaluating students' work and knowledge, it is important to give them “Voice and Choice” – PID #25UM in how they want to complete evaluations. Various suggestions were given, including surveys, work booklets, project-based assignments, self-evaluations, presentations, and peer evaluations. They emphasized that choice in evaluation allows students with different needs to excel.

“I provide choice boards a lot of times for whatever is going on in my classroom. Because you’ve got some people that are more introverted, more people that are more extroverted. It depends on their comfort level and what they bring to the classroom. So, providing those choices, I think, is critical, not jamming everyone in the same box.” – PID #60UW

A similar sentiment was expressed by educators who discussed the varying needs of students in each classroom.

“I think it’s important to make sure any evaluation includes students with various exceptionalities, and needs and so on, because, you know, in all of our classes, we have students with various needs. So I think that’s why it’s important to offer lots of different choices and for their different strengths and challenges.” - PID#02SRW

Theme 3: School, family and peer factors affecting health

Educators further highlighted students’ meso influences, specifically, school, family and peer factors that influence their substance use health literacy. Two sub-themes aligned within this context: a) normalization of substance use among youth and b) family and peer influences.

a) Normalization of substance use among youth

Educators explained that youth in their schools see drug use as normal and not a big deal.

“We all had that syndrome when we were younger. You know, you're invincible, you go around with this shield that nothing's going to penetrate. And unfortunately, with these kids, they get so far in that they can't get out after. And particularly, a lot of this stuff is getting laced now; I mean, you hear about the fentanyl coming through, and—you're really trying to battle the stigma of ‘it's no big deal; it's only a draw, sir,’ and ‘it's not addictive,’ and ‘I can quit this any time.’” – PID #SRM80

b) Family and Peer Influences

Educators acknowledged that students have varying experiences with substances. Some youth have parents or family members who consume substances which can influence student’s experiences. As noted by one educator,

“I mean, we’re talking doing drug education with grade fours. Some of these grade fours are going home and they're going to look at Mom and Dad, and they're smoking up. And they’re going, you know, ‘What's up here? They just said in school we shouldn’t be at this stuff.’” PID #SRM80

One educator raised concern about some youths' home environment and expressed that their parents may have a negative influence on the student's perception of drugs and healthy behaviours.

“But unfortunately, some of those kiddos are coming from households where that's also very common [drug use]. We have parents, for example, who use their kids. The parents have drug-seeking behavior. They'll say, ‘My kid has ADHD,’ and they really don't, and ‘they need medication, but they need a certain medication.’ And we come to realize that these kids are—there's no way they're medicated. We have parents who—we administer medications at school all the time, but we have some parents who are highly resistant to that because they don't want to give control of the medication away. And, I can't help but wonder how much of that our kiddos are soaking up because, if you're going home and thinking that this is the way it is, then this is the way it is. And it's so normalized that I worry sometimes that they don't know another way.” – PID #79UM

Educators noted other influences that contribute to youths' drug use, like the need to fit in with peers.

“I'm in a junior high, so the biggest thing I notice with my kiddos is that glamorized lifestyle you see in media. It's that, ‘all the cool kids are doing it.’ You know, it's that piece that we're battling more than anything else. And of course, the age group that we deal with are in the situation of, ‘Yeah, I understand all the dangers, but that will never happen to me. It might happen to somebody else, but it won't be me.’” – PID #79UM

Educators also considered the adverse childhood experiences (ACEs) that many youth endure, as these experiences may render them more vulnerable.

“I would echo what some people have already said. The issue is that we know that these kids are coming in and, like you mentioned earlier, the different ACEs they have, we know that these things are present in their lives.” PID #69SRW

Discussion

Drawing upon the social-ecological model as a framework for understanding adolescent health literacy (Higgins et al., 2009), our goal was to gain a better understanding of educators' perspectives on substance use-related issues and to explore strategies for delivering and assessing effective drug education to best support students' substance use health literacy. We have

previously applied this framework to qualitative work exploring youths' perspectives on cannabis legalization and education (Bishop et al., 2022; Higgins et al., 2009), which was valuable in highlighting factors influencing cannabis health literacy from the perspective of youth. Our findings for this paper highlighted the challenges educators are facing in schools and their communities with youth substance use and the need for drug education that: i) follows a harm reduction approach, ii) is up-to-date, iii) is culturally sensitive, iv) is interactive, v) is age-appropriate; vi) is easily accessible; vii) is cross-curricular; and viii) engages parents and the community. Further, we sought to gather insight from educators on assessing drug education programming to ensure resources are allotted appropriately and effectively; educators expressed the value of using multiple assessment methodologies and allowing students autonomy.

Student Risk and Protective Factors

Several risk and protective factors were identified in our study that can influence students' health literacy. Educators highlighted increased youth access to substances, which aligns with a 2021-2022 Canadian student drug survey (Health Canada, 2024) where 64% of Canadian students (grades 7-12) report that it is fairly easy or very easy to access alcohol, followed by cigarettes (59%), e-cigarettes containing nicotine (55%), cannabis (41%), prescription medicine (27%), and hallucinogens (16%). The increased availability of substances is a risk factor among youth as they may overestimate their peer's consumption levels and perceive substance use as normal. Whereas high-risk perception and high health literacy are protective factors associated with decreased substance use (Grevenstein et al., 2015), underscoring the importance of addressing substance use misperceptions and educating youth on how to navigate substance use decisions with the increased availability of substances (i.e., skills-health education). Further, educators noted that students come from diverse home environments

where exposure to environments where family members model negative substance use behaviours and attitudes is a risk factor (Griffin & Botvin, 2010), associated with adverse health effects (Cronholm et al., 2015), and conveys a perception of acceptability that could increase the likelihood of drug experimentation among youth (Nawi et al., 2021). Importantly, drug education strategies must consider the diversity of student experiences and environments throughout development and implementation.

Drug Education Delivery

Educators in our study identified an array of factors to consider in the delivery of drug education. Youth are using substances at increasingly early ages according to Canada's Student Health surveys (i.e., 13-14 years old; Health Canada, 2023); it is critical for age-appropriate and accessible drug education to be integrated into early school years, which has been voiced by youth (Bishop et al., 2022). Research (Welham, 2007) has showcased the positive impact of primary school interventions on children's knowledge and understanding of healthy lifestyles; however, continued education and support are needed to maintain the positive impact long-term. Lloyd et al. (2000) further highlighted the efficacy of early and continuing education involving parents and the wider community in decreasing later drug use. As noted by our study and in prior literature (Johnson et al., 2008), there is limited time allocated for health education and competing curriculum goals; therefore, a cross-curricular approach (i.e., drug education is applied to more than one teachable subject) to drug education is needed to get the most benefit and information to students. Implementing drug education and skills-building has garnered support (Gora-Harper, 1997; McWhirter, 2000). Skills-building aligns closely with health literacy, as a youth's ability to access, understand, evaluate and communicate health-related information and decisions is a key skill needed to make safe and informed substance use

decisions. However, as noted by the educators in our study, it is critical for educators to have appropriate professional learning (Downey et al., 2024; McWhirter, 2000) to equip them with transferable skills to share with students.

Drug Education Content

Educators expressed concern that current drug education resources are not up-to date with the status and popularity of drugs (e.g., cannabis, vaping) and there is a lack of cultural considerations and information. A recent scoping review highlighted the lack of harm reduction cannabis education in schools across Canada (Howe et al., 2023). Current education resources often follow traditional abstinence-based messaging which has not garnered support from youth and may be ineffective (Porath-Waller et al., 2013; Slemon et al., 2019; Watson et al., 2019). Educators in our study emphasized the value of developing harm reduction drug education and teaching decision-making skills so youth can handle situations involving drugs. Qualitative work with youth (Bishop et al., 2022) and educators in NL (Downey et al., 2024) echoes this sentiment, where youth and educators expressed their desire for harm reduction substance use education approaches. Previous harm reduction programming has successfully decreased substance use behaviours (D’Amico et al., 2012; McKay et al., 2014; Midford et al., 2014; Poulin & Nicholson, 2005; Wagner et al., 2014).

Assessing Student’s Drug Education

Educators in our study did not have a clear approach to assess students’ skill-based health education learning. There were inconsistencies on whether the assessment should be placed on assessing students’ knowledge, engagement, and changes in behaviour or, instead, if efforts and resources should be ensuring youth are getting access to the information. The latter point garnered greater support from our participants, where educators stressed the need for drug

education as a greater priority due to the gap in current resources, which aligned with other research (Downey et al., 2024; Howe et al., 2023; Watson et al., 2019). Despite this priority, it is crucial to ensure students are learning and applying this knowledge in the real world. Educators in our study highlighted the benefits of using multiple activities and methods (i.e., discussion circles, role-playing, quizzes, and projects) to educate youth on safe substance use and assess outcomes, which promotes students' autonomy by giving them choices in their learning and assessment and in turn would support their health literacy. This observation aligns with research showing that giving students choice regarding assessment methods positively impacts engagement, satisfaction, and performance (Jopp et al., 2022; Jopp et al., 2023; O'Neill, 2017; Spinney, 2023).

Limitations and Future Directions

The social-ecological model (Higgins et al., 2009) used in this study is centred around youths' health literacy, placing them at the center so educators could only share their perspectives of student experiences, and we were not able to explore youths' micro context, which considers intrapersonal factors and internal factors that influence youths' health literacy. Nonetheless, educators are key social influences on youths' health literacy and can provide valuable insight that complements our previous research that explored youths' health literacy through youths' perspectives (Bishop et al., 2022). It is important to recognize that while educators' perspectives are incredibly important, health literacy and substance use education are complex, as reflected in the social-ecological model; therefore, other perspectives and contexts are equally as important when discussing the implications of substance use education, like DECYDE. Additionally, because educators are self-selected, there is a possibility that their views may not fully represent all educators in the province, which impacts the transferability of

the findings. Although we ensured anonymity for participants, all educators were employed by NL Schools, which may have limited them fully sharing their opinions on the climate of substance use and substance use education in the province. Further, the transferability of findings to other settings may be limited, as this study shared the perspectives of educators in one province in Canada. However, we had urban and rural representation, which makes our results applicable to other jurisdictions where student drug use is prevalent. However, future research can explore educators' perspectives from other provinces and countries. Additionally, future research should evaluate whether drug education strategies are meeting their intended outcomes. The long-term impact of drug education strategies should be explored to help inform policy efforts.

Conclusion

The findings from this qualitative work highlight the shortfall of current substance use education and key considerations needed to implement and deliver effective substance use education for youth that considers the myriad of factors influencing youths' substance use health literacy. Knowledge from this work will support the development and implementation of the DECYDE strategy and appropriate ways to assess students' skills-based health education. Findings will help ensure the DECYDE strategy is receptive to and supported by educators and youth.

Chapter 4:
**Translating Findings into Context: Advancing Substance Use Education for Youth and
Future Directions**

Authorship statement: This chapter was written by myself, Emily Rowe, and reviewed by my supervisors Dr. Nick, Harris, Dr. Lisa Bishop and my committee member, Dr. Jennifer Donnan.

Summary of Main Findings

Given the prevalence of youth substance use, the consequences associated with youth substance use, and the lack of harm reduction programming targeting this issue, the CHERP team is developing and implementing The Drug Education Centred on Youth Decision Empowerment (DECYDE) strategy – a prevention and harm reduction drug education strategy targeting youth, parents and educators. This thesis aimed to identify key elements critical for ensuring the delivery and evaluation of DECYDE are effective. In the first study, we conducted a scoping review to identify harm reduction substance use education programs in Canada and the United States to understand how they are implemented and evaluated. Of 3,260 citations, only 20 programs met our inclusion criteria. Of those programs, only two were implemented in Canada; the majority ($n = 14$) were considered primary prevention programs, focussing on reducing substance use, and used a quantitative evaluation approach ($n = 16$). We identified the intended target population of those programs, which highlighted a limited number of programs directed toward elementary school-aged youth ($n = 2$), followed by at-risk youth ($n = 3$), high-school-aged-youth ($n = 4$), middle-school-aged youth ($n = 6$), and five fell in the other category (i.e., Hawaiian youth, Native American). Ultimately, we highlighted a gap in evaluated harm reduction programs in Canada and the United States-directed youth that uses multiple evaluation methods.

Through qualitative focus groups with educators ($n = 26$), in the second study we explored educators' perspectives on delivering and assessing substance use education in the classroom. Using a deductive thematic analysis guided by the Higgins et al. (2009) social-ecological model of adolescent health literacy, we conceptualized findings into meso and macro contexts. From our discussions with educators, we highlighted the challenges they face in

schools and their communities with youth substance use and the need for substance use education that: a) uses harm reduction philosophies, b) stays up-to-date on the popularity and legal status of substances, c) contains culturally sensitive, interactive, age-appropriate content, and cross-curricular content, d) is easily accessible, and e) engages parents and the community. Educators noted the challenges of evaluating drug education programming to ensure it is effective and the outcomes are measurable. They highlighted the value of using multiple assessment methods, ensuring students have autonomy, and continuing assessment over the long term.

Practical Implications

In developing, implementing, and evaluating DECYDE – a youth-centric harm reduction drug education strategy – it is essential to consider several practical implications that will enhance the effectiveness and reach of the program as well as other drug education strategies across Canada and the United States. The specific practical considerations addressed below are informed by the scoping review (Chapter 2), qualitative study with educators (Chapter 3) and past research (Bishop et al., 2022; Howe et al., 2023; Midford, 2020). These considerations are essential for ensuring drug education strategies are informative, engaging and supportive of students' diverse needs to address the overarching goal of promoting substance use health literacy and in turn safe substance use behaviours among youth. It is important to note that this thesis primarily reflects the perspectives of a group of educators in Newfoundland and Labrador. Therefore, future DECYDE work and other substance use education programs should aim to actively seek and incorporate the perspectives and lived and living experiences of more diverse educator populations. This will ensure that strategies developed are better suited to address the

diverse needs of educators and youth. Some of these recommendations have already been implemented in the DECYDE project, while others are in progress or planned for future action.

DECYDE needs to be easily available and accessible

The scoping review (Chapter 2) and the qualitative focus groups (Chapter 3) were consistent in highlighting the gap in current substance use education available for school-aged youth. These findings are consistent across the literature, where qualitative work with youth (Bishop et al., 2022), quantitative work with educators (Downey et al., 2024) and a scoping review of available cannabis education resources in Canada (Howe et al., 2023) all emphasized the need for harm reduction substance use education. In Canada, provinces and territories are expected to implement their own drug education strategies and resources, which leads to problems in the availability of programming and ensuring all citizens get access to education (Government of Canada, 2022). Educators in our study emphasized their concern about available resources for youth, and this was particularly true among educators in rural communities. For instance, the D.A.R.E. program is led by police officers and teaches grade 6 students how to resist drug use and peer pressure (DARE, 1983). While this program is implemented in NL, not all youth have access as it requires a community police officer, which is not always available in rural communities. Further, despite DARE's intention to increase respect for law enforcement, police often create barriers for some youth, as they may have had previous negative experiences with law enforcement or do not feel comfortable sharing their experiences (Bishop et al., 2022). Addressing these barriers and ensuring universal access to substance use education is critical to supporting all youth to make safe and informed choices about substances.

One solution is delivering education, particularly outside the classroom, is through social media, which was an avenue discussed by educators (Chapter 3) to 'meet youth where they are'.

Social media is an accessible and cost-effective avenue with a wide reach among youth, with youth screen use being an average of 7.5 hours a day (Centre for Disease Control and Prevention, 2018). Additionally, while speaking with youth (Bishop et al., 2022), they acknowledged that they often rely on social media to access substance use education, however, they are unsure whether this information is accurate. As a result of the gap in resources in rural communities and the rising popularity and utility of social media and technology, and the need to balance with accurate information in a format that is accessible to youth, a key component of DECYDE is to have all resources readily available on our website (DECYDE.ca). Using this modality aligns with educators' sentiments to 'Meet youth where they are' and has been well-received through our engagement with youth (Bishop et al., 2022).

DECYDE needs to be developmentally appropriate, with continued follow-up

Implementing drug education in early school years in a developmentally appropriate manner, with continued follow-up, is critical. Our scoping review (Chapter 2) highlighted the limited number of programs for elementary school-aged youth, despite educators (Chapter 3) highlighting the need for developmentally appropriate, substance use education in early school grades as youth are exposed to and consuming substances as early as Grade 4. This observation is consistent with research supporting that youth are continuing to become exposed to substances and are initiating substance use at increasingly early ages (Health Canada, 2024). Therefore, implementing drug education early and equipping youth with the knowledge and skills prior to first exposure has the potential to prevent harm by shaping positive behaviours and attitudes toward drug use before harmful patterns are developed. Research has demonstrated the positive impact of primary school interventions on children's understanding of healthy lifestyles (Welham, 2007). However, implementing one-off drug education programs in early school years

is not effective, nor are the effects maintained through 12th grade (Shope et al., 1998). Instead, continued education and support are needed to maintain the positive impact (Lloyd et al., 2000).

Continued follow-up while students navigate the school system and various development stages is key for reinforcing concepts and educating youth on new skills and knowledge to navigate substance use-related decisions (McBride, 2003; Midford, 2020). In doing this, it is critical for drug education programs to deliver relevant and age-appropriate material and lessons to youth that are tailored to their cognitive, emotional and social maturity (McBride, 2003). For instance, while the message not to drink and drive is important for everyone, this message is key and extremely relevant for youth who are reaching the legal age to drive. Likewise, younger students, specifically those transitioning from elementary to junior high, may encounter situations where they are offered unfamiliar substances by classmates or older siblings and may be more susceptible to peer pressure. Given that early and developmentally appropriate substance use education plays a crucial role in promoting healthy behaviours, shaping substance use patterns, limiting substance use harms and maintaining student engagement (McBride, 2003), the DECYDE strategy is making continuous efforts to ensure content is age-appropriate and relevant to youth. This is being accomplished through consultations with our youth advisory panel who provide feedback on the DECYDE content ensuring they are receptive to it.

DECYDE needs to be up-to-date and culturally sensitive

The status and popularity of substance use are continuously changing. Recently in Canada, cannabis has been legalized (Branch, 2020), e-cigarette use is on the rise (Health Canada, 2024) and accessibility to drugs is increasing (Health Canada, 2024). Yet, educators in our qualitative work pointed out that the current health curriculum in NL has not been updated since the 90s (Chapter 3). While educators have some autonomy in what they teach, it is

incredibly concerning, that resources provided by NL Schools are not up-to-date, nor reflects the climate of substance use among youth in NL and across Canada. There is an evident need for accessible, evidence-based information that is universal and to ensure we provide students with accurate and relevant information. Given the ever-changing landscape of substance use, outdated and inaccurate information can result in misconceptions and negatively influence students' attitudes toward substances (Amialchuk et al., 2019; Bishop et al., 2022; Griffin & Botvin, 2010). Therefore, it is essential for drug education to remain up to date to capture the ever-changing status of youth substance use and the situations they may navigate.

Further, substance use education must prioritize cultural sensitivity, acknowledge socio-cultural contexts and incorporate considerations of equity, diversity and inclusion (EDI). A scoping review exploring cannabis education resources in Canada highlighted a gap in resources that considers the experiences, interests and needs of Indigenous and other minority populations (Howe et al., 2023). Minority groups (i.e., BIPOC, 2SLGBTQ+) are at higher risk for substance use-related harms (Schuler & Collins, 2020; Sharma & Kanekar, 2008; Sikorski et al., 2019), and research has demonstrated programs with culturally appropriate content as more effective (Howe et al., 2023; Joint Consortium for School Health, 2009). While ensuring substance use education, like DECYDE, is culturally sensitive and responsive, emerged as a critical theme, discussion on how this should be achieved did not arise, potentially due to the scope and the demographic compositions of educators. However, educators noted the importance of creating culturally sensitive drug education resources (Chapter 3). In addition to considering cultural background, all youth have different family and community environments. Some youth may be constantly exposed to substances due to a family member struggling with a substance use disorder, or they may live in communities where substance use is prevalent. Given the diverse perspectives,

values and experiences youth have with substances, and the benefits of implementing culturally grounded and sensitive drug education (Harthun, 2002) it is imperative for drug education to tailor interventions to meet the diverse needs and experiences of students. Educators noted the importance of creating culturally sensitive drug education resources (Chapter 3), and we have therefore made a concerted effort to prioritize cultural sensitivity and EDI in developing the DECYDE strategy. However, meaningful cultural engagement is essential to DECYDEs success and therefore, future efforts should prioritize the inclusion of diverse perspectives and collaboration with cultural experts. With our partnerships with various patient partners, specifically those with lived and living experience, we will continue to gain valuable insight into the diverse challenges and situations youth may experience. Further, we will incorporate culturally relevant examples, stories and teaching into the curriculum materials. These efforts and this approach (i.e., highlighting the voices of cultural experts) will ensure cultural responsiveness and sensitivity is a core component of DECYDE and in turn will result in a program that is accessible, relevant, and effective for all students, regardless of their background.

DECYDE needs to be interactive and promote student engagement

Research consistently supports the need for interactive and engaging drug education programs (McBride, 2003) and this was further emphasized by educators in our second study and by youth in previous qualitative work (Bishop et al., 2022; Chapter 3). Youth have stressed that they are not receptive to strategies that involve extensive presentations or lectures on drugs, and instead emphasized the need for interactive activities. Likewise, educators in the qualitative study noted that employing diverse interactive activities is critical to allow students with different needs to excel and stay engaged. Examples of activities included surveys, work booklets, project-based assignments, presentations, and peer work. Interactive learning activities

that invite critical thinking about topics relevant to substances (e.g., peer pressure, social norms) have the potential to stimulate student discussions (McBride, 2003; Midford, 2020) around not only the risks of substance use but also individual motivations and contextual factors (Midford, 2020). For instance, Midford (2020) provided a hypothetical example of an exercise on drinking behaviours and factors students may discuss through this critical thinking exercise. In this example, students are given various substance use scenarios and have to constitute them as high or low risk. One example read, “Students identify drinking from a spirits bottle on a boat with other young drinkers celebrating the end of the school year.” Conversely, another example read, “Having one glass of champagne with relatives at a family wedding constitutes low-risk use of alcohol.” These hypothetical examples illustrate the spectrum of substance use behaviours and give students the opportunities to determine high vs. low levels of risk behaviours while engaging in critical thinking and discussions with peers (i.e., skills-based health education).

Interactive activities that elicit critical thinking tend to be more effective (Lilja et al., 2003) and are beneficial for students' experiential learning (McBride, 2003); although these are often time-consuming, coupled with the limited time allocated for health education, this is challenging for educators to accomplish. Therefore, it is beneficial to implement school-based drug education through a cross-curricular approach (i.e., applying drug education to more than one teachable subject). This method can increase student engagement and get the most information to students while still meeting curriculum outcomes. The DECYDE strategy has taken these challenges into consideration and has made it a priority to ensure material and activities are interactive and can be applied to various topics not exclusive to substance use (e.g., mental health, social-emotional learning). This includes developing videos, games, group activities, and more to accomplish this

goal and to ensure there are diverse learning opportunities for students using a skills-based health education approach.

DECYDE needs to expand drug education beyond the classroom

Drug education programs primarily focus on school-based implementation, with an emphasis on knowledge-based instruction, as evidenced by our scoping review and past research (Ennett et al., 2004). However, there is growing recognition of the need to extend educational efforts into the communities as they play a pivotal role in shaping youths' behaviours (Midford, 2020). Drug education that incorporates and contains broader family and community components has garnered success in changing youths' substance use attitudes (Holleran et al., 2014; Williams & Perry, 1998) and decreasing substance use behaviours (Holleran et al., 2014; Pentz et al., 1992). Midford (2010) discussed the importance of incorporating community components into drug education, suggesting that behaviours learned within a classroom setting are more likely to persist when they receive reinforcement and support from the community (Midford, 2020). Educators in our qualitative work highlighted the influential role families have in shaping youth attitudes and behaviors and, therefore, emphasized the importance of ensuring families are involved in their drug education.

Connectedness between schools, families, and communities is a key protective factor for youth health and substance use (Resnick et al., 1997; Sieving et al., 2017; Weaterson et al., 2018) and involving parents in drug education has shown positive effects in student substance use behaviours (Cohen & Linto, 1995; Marsiglia et al, 2019a; Marsiglia et al., 2019b). Addressing complex topics like substance use requires support from families, and encouraging involvement can foster open communication, strengthen familial bonds and influence youths' attitudes and behaviours. Engaging community organizations will allow for insight into challenges and

specific needs that need to be addressed within the community to support youth. This also allows the opportunity to create a comprehensive drug education program that leverages community resources and community-based initiatives such as recreational activities. Building on suggestions made by educators (Chapter 3) and the clear gap in harm reduction programs implemented in schools and in the community (Chapter 2), DECYDE recognizes the interconnectedness of youths' various social systems and environments and the value of incorporating all intrapersonal, interpersonal and community factors. Therefore, we are developing drug education resources for youth, parents and educators to ensure all parties involved in youths' development are well-equipped and informed with appropriate resources to inform youth on safe substance use choices. This allows us to create comprehensive and tailored interventions that empower youth to make safe choices and ensure content is relevant to the complex social contexts that they navigate in their daily lives.

DECYDE needs to be evaluated

With the development and implementation of drug education programs to promote safe substance use behaviours among youth, the role of program evaluation cannot be overstated. This was evident from the scoping review. Currently, there are limited evaluated programs in Canada and the US (Chapter 2), and educators stress the importance of implementing effective, evidence-based drug education in schools (Chapter 3). Evaluation is essential for several reasons, including ensuring program efficacy and ensuring accountability by stakeholders and policymakers where resources are allocated appropriately (Brown, 2001; Dimmitt, 2009). Evaluation provides the opportunity to ensure the program is effective at addressing the intended outcomes and objectives and provides insight into areas of improvement. However, current

program evaluations, specifically for drug education programs have missed the mark on how to assess intended outcomes and using appropriate tools to measure those intended outcomes.

Drug education programs often fail to measure factors beyond cessation or reduction (Chapter 2; Midford, 2020), which is an oversimplification of youths' drug use. While abstinence is the only way to avoid substance use-related harms and is the primary goal of harm reduction programs, to gain a comprehensive understanding of program effectiveness we must look at factors beyond cessation or reduction. In our qualitative work (Chapter 3), educators emphasized important factors like students' substance use knowledge, engagement, and changes in behaviour. This point aligns with the concept of health literacy, which would involve assessing their knowledge of substances, understanding associated risks and harms, and determining their ability to seek, access, and use health information. This comprehensive approach of using measurement tools that are not exclusive to cessation or reduction better aligns with the goal of harm reduction. For instance, if a student does not abstain from consuming a substance, but employs a harm reduction principle, like choosing a safer consumption method, while not necessarily safe, it is a safer behavior. The purpose of DECYDE is to inform youth on making safe substance use decisions and thus promoting safe behaviours. Therefore, by expanding measurement tools and assessing students' skill-based health education by using multiple methods (Chapter 3), beyond cessation or reduction, and instead exploring their substance use knowledge, engagement, changes in behaviours, understanding of associated risks and harms, their ability to seek, assess and use health information better aligns with the goals of harm reduction strategies like DECYDE – to reduce harm.

Directions for Future Research

With the ever-changing landscape of substance use in Canada and the increase in youth substance use and high-risk substance use behaviours, it is critical for drug education to be implemented early to influence youths' developmental trajectories, and to reduce substance use-related harms among youth. Youth need easily accessible, evidence-based information to support their substance use-related decisions that are centred on harm reduction philosophies. Despite this evident need, there is a gap in drug education that follows a harm reduction approach. The DECYDE strategy is targeting this gap in NL; however, other provinces and territories need to prioritize effective drug education and target this gap as well. DECYDE can be transferable to other jurisdictions, but we still require support and buy-in from key stakeholders who will make this information accessible to youth, parents, and educators.

Implementing harm reduction-based drug education like DECYDE is a priority; however, equally as important is measuring the impact of DECYDE and ensuring it is effective at reducing substance use-related harms and improving youths' healthy behaviors. Future research should explore the quality and rigour of the program to provide a clearer understanding of its efficacy. There is also a need to conduct program evaluations and develop accurate assessment tools for youth beyond self-report measures. As evidenced by our scoping review (Chapter 2), the majority of the programs identified relied on self-report measures to determine whether the program was effective at addressing their intended outcomes. Research has noted the limitations of using self-report measures with youth and stressed caution on relying on them to assess mental health and behavioural challenges (Broger, 2001; Teye & Peaslee, 2015). Further, there is a gap in tools used to measure skills-based learning, particularly harm reduction skills, as most measures are general to all high-risk behaviours (CSCP, 2023), or focus on knowledge, beliefs,

and perceptions of specific substances (Bayat et al., 2023; St. Jean et al., 2022). The ability to measure harm reduction substance use behavioural changes is critical to ensuring that DECYDE promotes safe choices among youth. Therefore, future research should prioritize developing and validating a harm-reduction substance use behaviour tool and observe youth substance use patterns longitudinally. Ultimately, emphasizing the importance of rigorous, evidence-based drug education development and evaluation is critical for promoting youth health.

Conclusion

This thesis provides important insights into the limited availability of current drug education programs targeting school-aged youth and identifies key elements critical for effectively targeting this concern. It also outlines strategies for developing, implementing, and evaluating a youth-centric harm reduction drug education strategy targeting youth, parents and educators. In order for drug education to be effective, and evidence-based in promoting substance use health literacy, as ensured by the DECYDE strategy, programs must: 1) be accessible and available to all students; 2) be developmentally appropriate, 3) promote continuous and implemented in every grade level; 4) stay up-to-date and culturally sensitive, reflecting the diverse background of students; 5) incorporate interactive elements to promote student engagement (i.e., skills-based health education); 6) engage families and communities to provide comprehensive support; 7) use appropriate assessments to evaluate students' learning; and 8) undergo rigorous evaluation to ensure efficacy according to feedback and evolving evidence. By adhering to these principles, DECYDE, and future drug education strategies can effectively promote substance use health literacy and healthy and safer substance use behaviours amongst youth.

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Appendix A

Scoping Review Search Strategy

Ovid MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-Indexed Citations and Daily <1946 to July 20, 2022>

1	(youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young adj3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*))).kf,tw.	2474576
2	((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") adj3 grade*).tw,kf.	95590
3	adolescent/ or child/ or child, abandoned/ or child, adopted/ or child, exceptional/ or child, gifted/ or "child of impaired parents"/ or child, foster/ or child, orphaned/ or child, unwanted/ or disabled children/ or minors/ or adolescent fathers/ or adolescent mothers/ or adolescent, hospitalized/ or adolescent, institutionalized/ or child, hospitalized/ or child, institutionalized/ or Students/	3108842
4	((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*)).tw,kf.	4567
5	1 or 2 or 3 or 4	4265049
6	(cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc).kf,tw.	122344
7	exp "marijuana use"/ or "recreational drug use"/ or Cannabis/ or Marijuana Abuse/	22741
8	6 or 7	125475
9	((harm or risk) adj2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*)).tw,kf.	234783
10	harm reduction/ or risk reduction behavior/ or risk-taking/	46495
11	9 or 10	270530
12	Schools/ or education/ or curriculum/ or School Teachers/	151337
13	(school* or junior high* or highschool* or academic* or (education* adj3 (setting* or facilit*))) or teacher* or classroom* or curricul*).kf,tw.	554066
14	12 or 13	612611
15	((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) adj3 (state* or region*)).kf,tw.	40744
16	((south* or north* or east* or west*) adj3 state*).kf,tw.	30494
17	(canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* adj4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) adj4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward	1655501

	island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) adj John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) adj4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) adj4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough adj4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worcester adj4 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson adj4 ms) or Missouri or (Columbia adj4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or West Virginia or Wisconsin or Wyoming).kf,tw.	
18	exp Canada/ or exp United States/	1596207
19	15 or 16 or 17 or 18	2671061
20	5 and 8 and 11 and 14 and 19	305
21	limit 20 to yr="2012 -Current"	133

Embase

No.	Query	Results
#34	#5 AND #8 AND #11 AND #14 AND #32 AND [2012-2022]/py	84
#33	#5 AND #8 AND #11 AND #14 AND #32	124
#32	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31	3073065
#31	'canada'/exp OR 'united states'/exp	1569940
#30	montana:ti,ab,kw OR bozeman:ti,ab,kw OR missoula:ti,ab,kw OR nebraska:ti,ab,kw OR omaha:ti,ab,kw OR lincoln:ti,ab,kw OR nevada:ti,ab,kw OR 'las vegas':ti,ab,kw OR 'new hampshire':ti,ab,kw OR	382151

	'new jersey':ti,ab,kw OR 'new mexico':ti,ab,kw OR 'new york':ti,ab,kw OR 'north carolina':ti,ab,kw OR 'north dakota':ti,ab,kw OR ohio:ti,ab,kw OR columbus:ti,ab,kw OR cleveland:ti,ab,kw OR cincinnati:ti,ab,kw OR oklahoma:ti,ab,kw OR oregon:ti,ab,kw OR portland:ti,ab,kw OR pennsylvania:ti,ab,kw OR philadelphia:ti,ab,kw OR hershey:ti,ab,kw OR 'rhode island':ti,ab,kw OR providence:ti,ab,kw OR 'south carolina':ti,ab,kw OR 'south dakota':ti,ab,kw OR tennessee:ti,ab,kw OR nashville:ti,ab,kw OR memphis:ti,ab,kw OR texas:ti,ab,kw OR houston:ti,ab,kw OR utah:ti,ab,kw OR vermont:ti,ab,kw OR virginia:ti,ab,kw OR richmond:ti,ab,kw OR washington:ti,ab,kw OR seattle:ti,ab,kw OR wisconsin:ti,ab,kw OR wyoming:ti,ab,kw	
#29	(columbia NEAR/4 mo):ti,ab,kw	81
#28	missouri:ti,ab,kw	6720
#27	(jackson NEAR/4 ms):ti,ab,kw	180
#26	burlington:ti,ab,kw OR michigan:ti,ab,kw OR detroit:ti,ab,kw OR 'ann arbor':ti,ab,kw OR 'east lansing':ti,ab,kw OR minnesota:ti,ab,kw OR minneapolis:ti,ab,kw OR rochester:ti,ab,kw OR 'st paul':ti,ab,kw OR 'saint paul':ti,ab,kw OR mississippi:ti,ab,kw	76556
#25	(worcester NEAR/2 ma):ti,ab,kw	160
#24	maryland:ti,ab,kw OR bethesda:ti,ab,kw OR baltimore:ti,ab,kw OR rockville:ti,ab,kw OR 'johns hopkins':ti,ab,kw OR massachusetts:ti,ab,kw OR boston:ti,ab,kw OR harvard:ti,ab,kw	100566
#23	(scarborough NEAR/4 me):ti,ab,kw	19
#22	hawai*:ti,ab,kw OR honolulu:ti,ab,kw OR idaho:ti,ab,kw OR boise:ti,ab,kw OR illinois:ti,ab,kw OR chicago:ti,ab,kw OR urbana:ti,ab,kw OR evanston:ti,ab,kw OR indiana:ti,ab,kw OR indianapolis:ti,ab,kw OR 'west lafayette':ti,ab,kw OR iowa:ti,ab,kw OR kansas:ti,ab,kw OR wichita:ti,ab,kw OR kentucky:ti,ab,kw OR lexington:ti,ab,kw OR louisville:ti,ab,kw OR bardstown:ti,ab,kw OR louisiana:ti,ab,kw OR 'new orleans':ti,ab,kw OR 'baton rouge':ti,ab,kw OR shreveport:ti,ab,kw OR maine:ti,ab,kw OR orono:ti,ab,kw	97510
#21	((athens OR augusta) NEAR/4 ga):ti,ab,kw	160
#20	huntsville:ti,ab,kw OR alaska:ti,ab,kw OR anchorage:ti,ab,kw OR fairbanks:ti,ab,kw OR arizona:ti,ab,kw OR phoenix:ti,ab,kw OR tuscon:ti,ab,kw OR flagstaff:ti,ab,kw OR arkansas:ti,ab,kw OR 'little rock':ti,ab,kw OR california:ti,ab,kw OR 'los angeles':ti,ab,kw OR 'san diego':ti,ab,kw OR 'san francisco':ti,ab,kw OR berkeley:ti,ab,kw OR stanford:ti,ab,kw OR colorado:ti,ab,kw ORvail:ti,ab,kw OR denver:ti,ab,kw OR connecticut:ti,ab,kw OR farmington:ti,ab,kw OR 'new haven':ti,ab,kw OR hartford:ti,ab,kw OR delaware:ti,ab,kw OR wilmington:ti,ab,kw OR newark:ti,ab,kw OR florida:ti,ab,kw OR miami:ti,ab,kw OR gainesville:ti,ab,kw OR jacksonville:ti,ab,kw OR tampa:ti,ab,kw OR tallahassee:ti,ab,kw OR georgia:ti,ab,kw OR atlanta:ti,ab,kw	245750

#19	((birmingham OR montgomery) NEAR/4 al):ti,ab,kw	480
#18	'united states':ti,ab,kw OR usa:ti,ab,kw OR us:ti,ab,kw OR appalachia*:ti,ab,kw OR 'great lakes':ti,ab,kw OR 'great plains':ti,ab,kw OR heartland:ti,ab,kw OR 'new england':ti,ab,kw OR 'deep south':ti,ab,kw OR 'black belt':ti,ab,kw OR 'rust belt':ti,ab,kw OR 'district of columbia':ti,ab,kw OR 'washington dc':ti,ab,kw OR alabama:ti,ab,kw	1244169
#17	canadian*:ti,ab,kw OR canada*:ti,ab,kw OR canadien*:ti,ab,kw OR 'british columbia*':ti,ab,kw OR vancouver*:ti,ab,kw OR ((victoria* NEAR/4 bc):ti,ab,kw) OR alberta*:ti,ab,kw OR calgary*:ti,ab,kw OR edmonton*:ti,ab,kw OR saskatchewan*:ti,ab,kw OR regina*:ti,ab,kw OR saskatoon*:ti,ab,kw OR manitoba*:ti,ab,kw OR winnipeg*:ti,ab,kw OR ontario*:ti,ab,kw OR toronto*:ti,ab,kw OR ottawa*:ti,ab,kw OR 'thunder bay*':ti,ab,kw OR (((hamilton OR london) NEAR/4 on):ti,ab,kw) OR quebec*:ti,ab,kw OR montreal*:ti,ab,kw OR 'new brunswick*':ti,ab,kw OR moncton*:ti,ab,kw OR fredericton*:ti,ab,kw OR 'prince edward island*':ti,ab,kw OR charlottetown*:ti,ab,kw OR 'nova scotia*':ti,ab,kw OR halifax*:ti,ab,kw OR labrador*:ti,ab,kw OR newfoundland*:ti,ab,kw OR (((st OR saint) NEAR/2 john*):ti,ab,kw) OR nunavut*:ti,ab,kw OR iqaluit*:ti,ab,kw OR 'northwest territor*':ti,ab,kw OR yellowknife*:ti,ab,kw OR yukon*:ti,ab,kw OR whitehorse*:ti,ab,kw	313526
#16	((south* OR north* OR east* OR west*) NEAR/3 state*):ti,ab,kw	34243
#15	((atlantic OR midatlantic OR midwest* OR 'mid west*' OR 'north east*' OR northeast* OR 'north west*' OR northwest* OR pacific OR 'south east*' OR southeast* OR 'south west*' OR southwest*) NEAR/3 (state* OR region*)):ti,ab,kw	49105
#14	#12 OR #13	1254453
#13	'education'/de OR 'curriculum'/de OR 'education program'/de OR 'primary education'/de OR 'secondary education'/de OR 'teaching'/de OR 'course content'/de OR 'school'/de OR 'high school'/de OR 'middle school'/de OR 'primary school'/de	731455
#12	school*:ti,ab,kw OR 'junior high*':ti,ab,kw OR highschool*:ti,ab,kw OR academic*:ti,ab,kw OR ((education* NEAR/3 (setting* OR facilit*)):ti,ab,kw) OR teacher*:ti,ab,kw OR classroom*:ti,ab,kw OR curricul*:ti,ab,kw	756348
#11	#9 OR #10	404070
#10	'risk attitude'/de OR 'risk behavior'/de OR 'risk reduction'/de OR 'risk mitigation'/de OR 'harm reduction'/de	129470
#9	((harm OR risk) NEAR/2 (reduc* OR minim* OR mitigat* OR prevent* OR lessen* OR decreas*)):ti,ab,kw	331279
#8	#6 OR #7	168104
#7	'cannabis'/de OR 'cannabis use'/exp OR 'cannabis addiction'/de	55320
#6	cannab*:ti,ab,kw OR marijuana*:ti,ab,kw OR marihuana*:ti,ab,kw OR bhang*:ti,ab,kw OR ganja:ti,ab,kw OR edible*:ti,ab,kw OR hash:ti,ab,kw OR hashish:ti,ab,kw OR weed:ti,ab,kw OR pot:ti,ab,kw OR thc:ti,ab,kw	153628

#5	#1 OR #2 OR #3 OR #4	4795775
#4	'child'/de OR 'abandoned child'/de OR 'adopted child'/de OR 'boy'/de OR 'brain damaged child'/de OR 'child of impaired parents'/de OR 'foster child'/de OR 'gifted child'/de OR 'girl'/de OR 'handicapped child'/de OR 'hospitalized child'/de OR 'institutionalized child'/de OR 'orphaned child'/de OR 'school child'/de OR 'single parent child'/de OR 'unwanted child'/de OR 'adolescent'/exp OR 'student'/de OR 'disabled student'/de OR 'elementary student'/de OR 'high school student'/de OR 'middle school student'/de	3320878
#3	('high school':ti,ab,kw OR highschool:ti,ab,kw) AND (freshman:ti,ab,kw OR freshmen:ti,ab,kw OR sophomore*:ti,ab,kw OR junior*:ti,ab,kw OR senior*:ti,ab,kw)	5802
#2	((fourth OR fifth OR sixth OR seventh OR eighth OR ninth OR tenth OR eleventh OR twelfth OR 4th OR 5th OR 6th OR 7th OR 8th OR 9th OR 10th OR 11th OR 12th OR four OR five OR six OR seven OR eight OR nine OR ten OR eleven OR twelve OR '4' OR '5' OR '6' OR '7' OR '8' OR '9' OR '10' OR '11' OR '12') NEAR/3 grade*):ti,ab,kw	188182
#1	youth*:ti,ab,kw OR adolescen*:ti,ab,kw OR child*:ti,ab,kw OR teen*:ti,ab,kw OR 'pre teen*':ti,ab,kw OR preteen*:ti,ab,kw OR girl*:ti,ab,kw OR boy*:ti,ab,kw OR kid:ti,ab,kw OR kids:ti,ab,kw OR juvenile*:ti,ab,kw OR minors:ti,ab,kw OR 'under age*':ti,ab,kw OR underage*:ti,ab,kw OR student*:ti,ab,kw OR ((young NEAR/3 (men OR man OR woman OR women OR male* OR female* OR person* OR people* OR population* OR individual* OR adult*)):ti,ab,kw)	3193630

Scopus

((TITLE-ABS-KEY ((youth* OR adolescen* OR child* OR teen* OR pre-teen* OR preteen* OR girl* OR boy* OR kid OR kids OR juvenile* OR minors OR under-age* OR underage* OR student* OR (young W/3 (men OR man OR woman OR women OR male* OR female* OR person* OR people* OR population* OR individual* OR adult*)))) OR (TITLE-ABS-KEY (((fourth OR fifth OR sixth OR seventh OR eighth OR ninth OR tenth OR eleventh OR twelfth OR 4th OR 5th OR 6th OR 7th OR 8th OR 9th OR 10th OR 11th OR 12th OR four OR five OR six OR seven OR eight OR nine OR ten OR eleven OR twelve OR "4" OR "5" OR "6" OR "7" OR "8" OR "9" OR "10" OR "11" OR "12") W/3 grade*))) OR (TITLE-ABS-KEY (((high AND school OR highschool) AND (freshman OR freshmen OR sophomore* OR junior* OR senior*)))) AND (TITLE-ABS-KEY ((cannab* OR marijuana* OR marihuana* OR bhang* OR ganja OR hemp OR edible* OR hash OR hashish OR weed OR pot OR the))) AND (TITLE-ABS-KEY (((harm OR risk) W/2 (reduc* OR minim* OR mitigat* OR prevent* OR lessen* OR decreas*))) AND (TITLE-ABS-KEY ((school* OR "junior high*" OR highschool* OR academic* OR (education* W/3 (setting* OR facilit*)) OR teacher* OR classroom* OR curricul*))) AND ((TITLE-ABS-KEY (((atlantic OR midatlantic OR midwest* OR mid-west* OR north-east* OR northeast* OR north-west* OR northwest* OR pacific OR south-east* OR southeast* OR south-west* OR southwest*) W/3 (state* OR region*))) OR (TITLE-ABS-KEY (((south* OR north* OR east* OR west*) W/3 state*))) OR (TITLE-ABS-KEY ((canadian* OR canada*

OR canadien* OR "british columbia*" OR vancouver* OR (victoria* W/4 bc) OR alberta* OR calgary* OR edmonton* OR saskatchewan* OR regina* OR saskatoon* OR manitoba* OR winnipeg* OR ontario* OR toronto* OR ottawa* OR "thunder bay*" OR ((hamilton OR london) W/4 on) OR quebec* OR montreal* OR "new brunswick*" OR moncton* OR fredericton* OR "prince edward island*" OR charlottetown* OR "nova scotia*" OR halifax* OR labrador* OR newfoundland* OR ((st OR saint) W/2 john*) OR nunavut* OR iqaluit* OR "northwest territor*" OR yellowknife* OR yukon* OR whitehorse* OR "united states" OR usa OR us OR appalachia* OR "great lakes" OR "great plains" OR heartland OR "new England" OR "deep south" OR "black belt" OR "rust belt" OR "district of Columbia" OR "Washington dc" OR alabama OR ((birmingham OR montgomery) W/4 al) OR huntsville OR alaska OR anchorage OR fairbanks OR arizona OR phoenix OR tuscon OR flagstaff OR arkansas OR "little rock" OR california OR "los angeles" OR "san diego" OR "san Francisco" OR berkeley OR stanford OR colorado OR vail OR denver OR connecticut OR farmington OR "new haven" OR hartford OR delaware OR wilmington OR newark OR florida OR miami OR gainesville OR jacksonville OR tampa OR tallahassee OR georgia OR atlanta OR ((athens OR augusta) W/4 ga) OR hawai* OR honolulu OR idaho OR boise OR illinois OR chicago OR urbana OR evanston OR indiana OR indianapolis OR "West Lafayette" OR iowa OR kansas OR wichita OR kentucky OR lexington OR louisville OR bardstown OR louisiana OR "new Orleans" OR "baton rouge" OR shreveport OR maine OR orono OR (scarborough W/4 me) OR maryland OR bethesda OR baltimore OR rockville OR "johns Hopkins" OR massachusetts OR boston OR harvard OR (worcester W/4 ma) OR burlington OR michigan OR detroit OR "ann arbor" OR "east lansing" OR minnesota OR minneapolis OR rochester OR "st paul" OR "saint paul" OR mississippi OR (jackson W/4 ms) OR missouri OR (columbia W/4 mo) OR montana OR bozeman OR missoula OR nebraska OR omaha OR lincoln OR nevada OR "Las Vegas" OR "New Hampshire" OR "New Jersey" OR "New Mexico" OR "New York" OR "North Carolina" OR "North Dakota" OR ohio OR columbus OR cleveland OR cincinnati OR oklahoma OR oregon OR portland OR pennsylvania OR philadelphia OR hershey OR "Rhode Island" OR providence OR "South Carolina" OR "South Dakota" OR tennessee OR nashville OR memphis OR texas OR houston OR utah OR vermont OR virginia OR richmond OR washington OR seattle OR wisconsin OR wyoming))) AND (LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012))

83 results

ERIC

#	Query	Results
S21	S5 AND S8 AND S11 AND S14 AND S19	58
S20	S5 AND S8 AND S11 AND S14 AND S19	100
S19	S15 OR S16 OR S17 OR S18	505,683

S18	DE "North Americans" OR DE "African Americans" OR DE "Alaska Natives" OR DE "Anglo Americans" OR DE "Asian Americans" OR DE "Canada Natives" OR DE "Eskimos" OR DE "French Canadians" OR DE "Hispanic Americans" OR DE "Italian Americans" OR DE "Pacific Americans" OR DE "Polish Americans"	24,052
S17	TI ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worcester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR AB ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or	492,228

<p>Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (Worcester N2 ma) or Burlington or Michigan or Detroit or Ann Arbor or East Lansing or Minnesota or Minneapolis or Rochester or St Paul or Saint Paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or Providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR SU ((Canadian* or Canada* or Canadian* or British Columbia* or Vancouver* or (Victoria* N4 bc) or Alberta* or Calgary* or Edmonton* or Saskatchewan* or Regina* or Saskatoon* or Manitoba* or Winnipeg* or Ontario* or Toronto* or Ottawa* or Thunder Bay* or ((Hamilton or London) N4 on) or Quebec* or Montreal* or New Brunswick* or Moncton* or Fredericton* or Prince Edward Island* or Charlottetown* or Nova Scotia* or Halifax* or Labrador* or Newfoundland* or ((St or Saint) N2 John*) or Nunavut* or Iqaluit* or Northwest Territory* or Yellowknife* or Yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or</p>

	new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (Worcester N2 ma) or Burlington or Michigan or Detroit or Ann Arbor or East Lansing or Minnesota or Minneapolis or Rochester or St Paul or Saint Paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or Providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming))	
S16	TI (((south* or north* or east* or west*) N3 state*)) OR AB (((south* or north* or east* or west*) N3 state*)) OR SU (((south* or north* or east* or west*) N3 state*))	11,806
S15	TI (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR AB (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR SU (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*)))	9,156
S14	S12 OR S13	1,136,642
S13	DE "Proprietary Schools" OR DE "Religious Schools" OR DE "Bilingual Schools" OR DE "Boarding Schools" OR DE "Residential Schools" OR DE "Community Schools" OR DE "Consolidated Schools" OR DE "Correspondence Schools" OR DE "Day Schools" OR DE "Disadvantaged Schools" OR DE "Elementary Schools" OR DE "Experimental Schools" OR DE "Folk Schools" OR DE "Free Schools" OR DE "International Schools" OR DE "Laboratory Schools" OR DE "Magnet Schools" OR DE "Middle Schools" OR DE "Military Schools" OR DE "Montessori Schools" OR DE "Multiunit Schools" OR DE "Neighborhood Schools" OR DE "Open Plan Schools" OR DE "Private Schools" OR DE "Professional Development Schools" OR DE "Public Schools" OR DE "Charter Schools" OR DE "Racially Balanced Schools" OR DE "Regional Schools" OR DE "Rural Schools" OR DE "Secondary Schools" OR DE "High Schools" OR DE "Junior High Schools" OR DE "Single Sex Schools" OR DE "Slum Schools" OR DE "Small Schools" OR DE "Special Schools" OR DE "State Schools" OR DE "Suburban Schools" OR DE "Summer Schools" OR DE "Traditional Schools" OR DE "Urban Schools" OR DE "Virtual Schools" OR DE "Vocational Schools" OR DE "Year Round Schools" OR DE "Curriculum" OR DE "Core Curriculum" OR DE "Elementary School Curriculum" OR DE	345,851

	"Secondary School Curriculum" OR DE "Instruction" OR DE "Teachers" OR DE "Adult Educators" OR DE "African American Teachers" OR DE "Agriculture Teachers" OR DE "Art Teachers" OR DE "Beginning Teachers" OR DE "Bilingual Teachers" OR DE "Catholic Educators" OR DE "Cooperating Teachers" OR DE "Early Childhood Teachers" OR DE "Elementary School Teachers" OR DE "Experienced Teachers" OR DE "Family and Consumer Sciences Teachers" OR DE "Industrial Arts Teachers" OR DE "Instructor Coordinators" OR DE "Itinerant Teachers" OR DE "Language Teachers" OR DE "Lay Teachers" OR DE "Master Teachers" OR DE "Mathematics Teachers" OR DE "Middle School Teachers" OR DE "Minority Group Teachers" OR DE "Music Teachers" OR DE "Physical Education Teachers" OR DE "Preschool Teachers" OR DE "Public School Teachers" OR DE "Reading Teachers" OR DE "Remedial Teachers" OR DE "Resource Teachers" OR DE "Science Teachers" OR DE "Secondary School Teachers" OR DE "Special Education Teachers" OR DE "Student Teachers" OR DE "Substitute Teachers" OR DE "Teacher Interns" OR DE "Teacher Researchers" OR DE "Television Teachers" OR DE "Tutors" OR DE "Vocational Education Teachers" OR DE "White Teachers" OR DE "Writing Teachers"	
S12	TI ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR AB ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR SU ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*))	1,131,587
S11	S9 OR S10	13,742
S10	DE "Risk"	10,912
S9	TI (((harm or risk) N2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR AB (((harm or risk) N2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR SU (((harm or risk) N2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*)))	3,810
S8	S6 OR S7	4,255
S7	DE "Marijuana"	1,127
S6	TI (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc) OR AB (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc) OR SU (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc)	4,255
S5	S1 OR S2 OR S3 OR S4	1,164,629
S4	DE "Youth" OR DE "Disadvantaged Youth" OR DE "Out of School Youth" OR DE "Rural Youth" OR DE "Urban Youth" OR DE "Adolescents" OR DE "Children" OR DE "African American Children" OR DE "Grandchildren" OR DE "Hospitalized Children" OR DE "Latchkey Children" OR DE "Migrant Children" OR DE "Minority Group Children" OR DE "Preadolescents" OR DE "Early Adolescents" OR DE "Late Adolescents" OR DE "Students" OR	317,899

	DE "Advanced Students" OR DE "African American Students" OR DE "American Indian Students" OR DE "Asian American Students" OR DE "Bilingual Students" OR DE "Elementary School Students" OR DE "Foreign Students" OR DE "Hispanic American Students" OR DE "Low Income Students" OR DE "Middle School Students" OR DE "Minority Group Students" OR DE "Pregnant Students" OR DE "Secondary School Students" OR DE "High School Students" OR DE "Junior High School Students" OR DE "Self Supporting Students" OR DE "Special Needs Students" OR DE "Student Athletes" OR DE "Students with Disabilities" OR DE "Terminal Students" OR DE "Transfer Students" OR DE "White Students" OR DE "Grade 10" OR DE "Grade 11" OR DE "Grade 12" OR DE "Grade 4" OR DE "Grade 5" OR DE "Grade 6" OR DE "Grade 7" OR DE "Grade 8" OR DE "Grade 9" OR DE "Intermediate Grades"	
S3	TI (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR AB (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR SU (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*)))	53,474
S2	TI (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)) OR AB (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)) OR SU (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*))	99,627
S1	TI ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))) OR AB ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))) OR SU ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*))))	1,151,786

PsycINFO

#	Query	Results
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S20	S3 AND S8 AND S11 AND S14 AND S18	61
S19	S3 AND S8 AND S11 AND S14 AND S18	123
S18	S15 OR S16 OR S17	715,687
S17	<p>TI ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worchester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR AB ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust</p>	709,249

	<p>belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worcester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR SU ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or</p>	
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	johns Hopkins or Massachusetts or Boston or Harvard or (worcester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming))	
S16	TI (((south* or north* or east* or west*) N3 state*)) OR AB (((south* or north* or east* or west*) N3 state*)) OR SU (((south* or north* or east* or west*) N3 state*))	15,053
S15	TI (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR AB (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR SU (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*)))	17,234
S14	S12 OR S13	762,784
S13	DE "Academic Settings" OR DE "Boarding Schools" OR DE "Charter Schools" OR DE "Elementary Schools" OR DE "High Schools" OR DE "Institutional Schools" OR DE "Junior High Schools" OR DE "Middle Schools" OR DE "Nongraded Schools" OR DE "Schools" OR DE "Curriculum" OR DE "Teaching" OR DE "Teachers" OR DE "Elementary School Teachers" OR DE "High School Teachers" OR DE "Junior High School Teachers" OR DE "Middle School Teachers" OR DE "Student Teachers"	189,827
S12	TI ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR AB ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR SU ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*))	747,763
S11	S9 OR S10	63,605
S10	(DE "Harm Reduction") OR (DE "Risk Taking")	18,649
S9	TI (((harm or risk) N2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR AB (((harm or risk) N2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR SU (((harm or risk) N2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*)))	51,179
S8	S4 OR S5 OR S6 OR S7	1,848,714

S7	TI (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)) OR AB (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)) OR SU (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)))	80,223
S6	DE "Early Adolescence" OR DE "Puberty" OR DE "Child Characteristics" OR DE "Childhood Development" OR DE "Child Behavior" OR DE "Adolescent Development" OR DE "Adolescent Behavior" OR DE "Adolescent Characteristics" OR DE "Student Attitudes" OR DE "Students" OR DE "Elementary School Students" OR DE "Intermediate School Students" OR DE "Primary School Students" OR DE "High School Students" OR DE "International Students" OR DE "Junior High School Students" OR DE "Middle School Students" OR DE "Student Characteristics" OR DE "Grade Level"	333,532
S5	TI (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR AB (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR SU (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))))	25,014
S4	TI ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))) OR AB ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))) OR SU ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))))	1,840,424
S3	S1 OR S2	32,599
S2	DE "Hashish" OR DE "Tetrahydrocannabinol" OR DE "Cannabis" OR DE "Cannabidiol" OR DE "Marijuana" OR DE "Marijuana Usage" OR DE "Cannabis Use Disorder"	14,912
S1	TI (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or the) OR AB (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or the) OR SU (cannab* or marijuana* or	32,492

	marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc)	
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#	Query	Results
S20	S5 AND S8 AND S11 AND S14 AND S18	91
S19	S5 AND S8 AND S11 AND S14 AND S18	144
S18	S15 OR S16 OR S17	7,035,714
S17	TI ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worchester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR AB ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton	6,967,022

<p>or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worcester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR SU ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or</p>
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	Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (Worcester N2 ma) or Burlington or Michigan or Detroit or Ann Arbor or East Lansing or Minnesota or Minneapolis or Rochester or St Paul or Saint Paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or Providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)	
S16	TI (((south* or north* or east* or west*) N3 state*)) OR AB (((south* or north* or east* or west*) N3 state*)) OR SU (((south* or north* or east* or west*) N3 state*))	92,666
S15	TI (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR AB (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR SU (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*)))	83,166
S14	S12 OR S13	1,585,000
S13	DE "SCHOOLS" OR DE "AFRICAN American schools" OR DE "ALTERNATIVE schools" OR DE "BILINGUAL schools" OR DE "BOARDING schools" OR DE "CHARTER schools" OR DE "COEDUCATIONAL schools" OR DE "CORRESPONDENCE schools & courses" OR DE "DAY schools" OR DE "DISADVANTAGED schools" OR DE "EFFECTIVE schools" OR DE "ELEMENTARY schools" OR DE "ETHNIC schools" OR DE "FAILING schools" OR DE "LGBTQ schools" OR DE "PRIMARY schools" OR DE "PRIVATE schools" OR DE "PUBLIC schools" OR DE "RELIGIOUS schools" OR DE "RURAL schools" OR DE "SECONDARY schools" OR DE "SINGLE sex schools" OR DE "SMALL schools" OR DE "SUBURBAN schools" OR DE "SUMMER schools" OR DE "TRADITIONAL schools" OR DE "URBAN schools" OR DE "VIRTUAL schools" OR DE "YEAR-round schools" OR DE "AFTER school programs" OR DE "TEACHERS" OR DE "ACTORS as teachers" OR DE "ADULT educators" OR DE "AFRICAN American artists as teachers" OR	282,048

<p>DE "AFRICAN American teachers" OR DE "AGRICULTURE teachers" OR DE "ALEXANDER technique teachers" OR DE "ANTHROPOLOGY teachers" OR DE "ARCHAEOLOGY teachers" OR DE "ARCHITECTURE teachers" OR DE "ARTISTS as teachers" OR DE "ARTS teachers" OR DE "AUTHORS as teachers" OR DE "AUTOMOBILE driver education teachers" OR DE "BEGINNING teachers" OR DE "BILINGUAL teachers" OR DE "BLACK teachers" OR DE "BUSINESS teachers" OR DE "BUSINESSPEOPLE as teachers" OR DE "CHEMISTRY teachers" OR DE "CHILDREN as teachers" OR DE "CHILDREN of teachers" OR DE "CHRISTIAN teachers" OR DE "COLLEGE teachers" OR DE "COMMUNICATION teachers" OR DE "COMMUNIST teachers" OR DE "COOPERATING teachers" OR DE "COSMETOLOGY teachers" OR DE "DISTANCE education teachers" OR DE "EARLY childhood teachers" OR DE "ECONOMICS teachers" OR DE "ELEMENTARY school teachers" OR DE "ENGINEERING teachers" OR DE "EXPERIENCED teachers" OR DE "FILM teachers" OR DE "FINANCE teachers" OR DE "FLOATING teachers" OR DE "FOREIGN teachers" OR DE "FORESTRY teachers" OR DE "GAY teachers" OR DE "GENEALOGY teachers" OR DE "GOLF instructors" OR DE "GOVERNESSES" OR DE "HEALTH education teachers" OR DE "HETEROSEXUAL teachers" OR DE "HIGH school teachers" OR DE "HISPANIC American teachers" OR DE "HISTORY teachers" OR DE "HOME economics teachers" OR DE "HOME room teachers" OR DE "IMAMS (Mosque officers) as teachers" OR DE "INDUSTRIAL arts teachers" OR DE "INFORMATION science teachers" OR DE "ITINERANT teachers" OR DE "JEWISH teachers" OR DE "JOURNALISM teachers" OR DE "JOURNALISTS as teachers" OR DE "JUNIOR high school teachers" OR DE "KARATE teachers" OR DE "KINDERGARTEN teachers" OR DE "LANGUAGE arts teachers" OR DE "LANGUAGE teachers" OR DE "LAW teachers" OR DE "LAY teachers" OR DE "LEAD teachers" OR DE "LGBTQ+ teachers" OR DE "LIBRARIES & teachers" OR DE "LIBRARY media specialists" OR DE "LIBRARY orientation for teachers" OR DE "LIBRARY science teachers" OR DE "LINGUISTICS teachers" OR DE "LITERATURE teachers" OR DE "LUTHERAN teachers" OR DE "MALE teachers" OR DE "MASTER teachers" OR DE "MATHEMATICS teachers" OR DE "MEDICAL teaching personnel" OR DE "MEXICAN American teachers" OR DE "MIDDLE school teachers" OR DE "MINORITY teachers" OR DE "MUSLIM teachers" OR DE "NATIVE American teachers" OR DE "NUNS as public school teachers" OR DE "NURSE educators" OR DE "PARENTS as teachers" OR DE "PART-time teachers" OR DE "PHILOSOPHY teachers" OR DE "PHYSICAL education teachers" OR DE "POETS as teachers" OR DE "PREPARATORY school teachers" OR DE "PRESCHOOL teachers" OR DE "PRIVATE school teachers" OR DE "PROBATIONARY teachers" OR DE "PSYCHOLOGY teachers" OR DE "PUBLIC school teachers" OR DE "PUBLIC speaking teachers" OR DE "READING teachers" OR DE "REMEDIAL teachers" OR DE "RESOURCE teachers" OR DE "RETIRED</p>

	teachers" OR DE "SCIENCE teachers" OR DE "SCIENTISTS as teachers" OR DE "SECONDARY school teachers" OR DE "SELF-efficacy in teachers" OR DE "SEX educators" OR DE "SOCIAL science teachers" OR DE "SOCIAL work teachers" OR DE "SOCIAL workers as teachers" OR DE "SPECIAL education teachers" OR DE "STUDENT teachers" OR DE "SUBSTITUTE teachers" OR DE "SUNDAY school teachers" OR DE "TEACHER coordinators" OR DE "TEACHER effectiveness" OR DE "TEACHER researchers" OR DE "TEACHER supervisors" OR DE "TEACHER transfer" OR DE "TEACHERS & community" OR DE "TEACHERS as astronauts" OR DE "TEACHERS as authors" OR DE "TEACHERS in art" OR DE "TEACHERS of brain-damaged children" OR DE "TEACHERS of children with mental disabilities" OR DE "TEACHERS of deafblind people" OR DE "TEACHERS of homeless children" OR DE "TEACHERS of problem children" OR DE "TEACHERS of the blind" OR DE "TEACHERS of the deaf" OR DE "TEACHERS with disabilities" OR DE "TEACHERS' assistants" OR DE "TEACHERS' backgrounds" OR DE "TECHNICAL education teachers" OR DE "TECHNOLOGY teachers" OR DE "VISITING professors" OR DE "VOCATIONAL teachers" OR DE "WHITE teachers" OR DE "WOMEN teachers" OR DE "YOGA teachers" OR DE "CURRICULUM" OR OR DE "ELEMENTARY education" OR DE "MIDDLE school education" OR DE "SECONDARY education" OR DE "TEACHING" OR DE "ELEMENTARY school teaching" OR DE "HIGH school teaching" OR DE "JUNIOR high school teaching" OR DE "MIDDLE school teaching" OR DE "PRIMARY school teaching"	
S12	TI ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR AB ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR SU ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*))	1,567,228
S11	S9 OR S10	210,075
S10	DE "HARM reduction" OR DE "RISK-taking behavior"	16,629
S9	TI (((harm or risk) N2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR AB (((harm or risk) N2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR SU (((harm or risk) N2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*)))	199,317
S8	S6 OR S7	197,544
S7	DE "BHANG (Drug)" OR DE "MARIJUANA" OR DE "MARIJUANA abuse" OR DE "SYNTHETIC marijuana" OR DE "MARIJUANA smoke" OR DE "HASHISH" OR DE "CANNABIS" OR DE "CANNABIS edibles" OR DE "MARIJUANA & society"	20,296
S6	TI (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc) OR AB (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc) OR SU (cannab* or marijuana* or	197,262

	marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc)	
S5	S1 OR S2 OR S3 OR S4	3,349,808
S4	DE "ABUSED children" OR DE "ADOPTED children" OR DE "ASIAN children" OR DE "BLACK children" OR DE "BOYS" OR DE "BUDDHIST children" OR DE "CHILD acrobats" OR DE "CHILD actors" OR DE "CHILD artists" OR DE "CHILD beauty pageant contestants" OR DE "CHILD circus performers" OR DE "CHILD dancers" OR DE "CHILD development" OR DE "CHILD filmmakers" OR DE "CHILD painters" OR DE "CHILD patients" OR DE "CHILD photographers" OR DE "CHILD prostitutes" OR DE "CHILD saints" OR DE "CHILDREN of abused wives" OR DE "CHILDREN of attention-deficit-disordered parents" OR DE "CHILDREN of bisexual parents" OR DE "CHILDREN of divorced parents" OR DE "CHILDREN of foreign workers" OR DE "CHILDREN of gay parents" OR DE "CHILDREN of governors" OR DE "CHILDREN of heterosexual parents" OR DE "CHILDREN of immigrants" OR DE "CHILDREN of intercountry marriage" OR DE "CHILDREN of interethnic marriage" OR DE "CHILDREN of interfaith marriage" OR DE "CHILDREN of migrant laborers" OR DE "CHILDREN of minorities" OR DE "CHILDREN of mixed orientation marriages" OR DE "CHILDREN of older parents" OR DE "CHILDREN of parents with disabilities" OR DE "CHILDREN of prostitutes" OR DE "CHILDREN of royalty" OR DE "CHILDREN of school principals" OR DE "CHILDREN of single parents" OR DE "CHILDREN of spies" OR DE "CHILDREN of teenage mothers" OR DE "CHILDREN of the rich" OR DE "CHILDREN of unemployed parents" OR DE "CHILDREN of unmarried parents" OR DE "CHILDREN of working parents" OR DE "CHILDREN with dwarfism" OR DE "CHILDREN with mental illness" OR DE "CHRISTIAN children" OR DE "CITY children" OR DE "DEAFBLIND children" OR DE "DEPORTED children" OR DE "FIRST-born children" OR DE "FOSTER children" OR DE "GIRLS" OR DE "GRANDCHILDREN" OR DE "HINDU children" OR DE "HIV-positive children" OR DE "HOMELESS children" OR DE "IMMIGRANT children" OR DE "INDIGENOUS children" OR DE "INTERSEX children" OR DE "JEWISH children" OR DE "MEDICALLY uninsured children" OR DE "MIDDLE children" OR DE "MISSING children" OR DE "MULTIRACIAL children" OR DE "MUSLIM children" OR DE "ONLY child" OR DE "ORPHANS" OR DE "OVERWEIGHT children" OR DE "POOR children" OR DE "PROBLEM children" OR DE "REFUGEE children" OR DE "ROMANI children" OR DE "RUNAWAY children" OR DE "RURAL children" OR DE "SCHOOL children" OR DE "SECOND-born children" OR DE "SICK children" OR DE "STEPCHILDREN" OR DE "STREET children" OR DE "SUBURBAN children" OR DE "THIRD culture children" OR DE "TORRES Strait Islander children" OR DE "TRANSGENDER children" OR DE "UNWANTED children" OR DE "VAGRANT children" OR DE "VEGETARIAN children" OR DE "WHITE children" OR DE "YOUNGEST child" OR DE "ABUSED teenagers" OR DE "BLACK	473,185

<p>teenagers" OR DE "CHRISTIAN teenagers" OR DE "EXCEPTIONAL teenagers" OR DE "GAY teenagers" OR DE "GIFTED teenagers" OR DE "HIV-positive teenagers" OR DE "HOMELESS teenagers" OR DE "JEWISH teenagers" OR DE "LGBTQ teenagers" OR DE "MINORITY teenagers" OR DE "MUSLIM teenagers" OR DE "NATIVE American teenagers" OR DE "OVERWEIGHT teenagers" OR DE "POOR teenagers" OR DE "RURAL teenagers" OR DE "SEXUALLY abused teenagers" OR DE "SUBURBAN teenagers" OR DE "TEENAGE artists" OR DE "TEENAGE boys" OR DE "TEENAGE businesspeople" OR DE "TEENAGE girls" OR DE "TEENAGE immigrants" OR DE "TEENAGE parents" OR DE "TEENAGE photographers" OR DE "TEENAGE refugees" OR DE "TEENAGERS with disabilities" OR DE "TEENAGERS with mental illness" OR DE "URBAN teenagers" OR DE "HIGH school students" OR DE "PRETEENS" OR DE "MINORS" OR DE "AT-risk youth" OR DE "BISEXUAL youth" OR DE "BLACK youth" OR DE "BUDDHIST youth" OR DE "CHRISTIAN youth" OR DE "DEAF youth" OR DE "HIV-positive youth" OR DE "HOMELESS youth" OR DE "INDIGENOUS youth" OR DE "JEWISH youth" OR DE "JUVENILE offenders" OR DE "LGBTQ youth" OR DE "MINORITY youth" OR DE "MUSLIM youth" OR DE "NATIVE American youth" OR DE "PALESTINIAN youth" OR DE "POOR youth" OR DE "PROBLEM youth" OR DE "QUESTIONING youth" OR DE "ROMANI youth" OR DE "RUNAWAY teenagers" OR DE "RURAL youth" OR DE "SCHOOL dropouts" OR DE "SCOUTS (Youth organization members)" OR DE "SIKH youth" OR DE "STREET youth" OR DE "UNEMPLOYED youth" OR DE "URBAN youth" OR DE "WHITE youth" OR DE "YOUNG inventors" OR DE "YOUTH with disabilities" OR DE "YOUTH with mental illness" OR DE "YOUTH" OR DE "ADOLESCENCE" OR DE "CHILDREN" OR DE "TEENAGERS" OR DE "STUDENTS" OR DE "ADVANCED students" OR DE "AMERICAN students" OR DE "ARAB students" OR DE "ARABIC-speaking students" OR DE "ASIAN students" OR DE "BILINGUAL students" OR DE "BISEXUAL students" OR DE "BLACK students" OR DE "CANADIAN students" OR DE "CHINESE-speaking students" OR DE "CHRISTIAN students" OR DE "EDUCATIONALLY disadvantaged students" OR DE "FRENCH-Canadian students" OR DE "FRENCH-speaking students" OR DE "GAY students" OR DE "HOMELESS students" OR DE "IMMIGRANT students" OR DE "INDIAN students (Asians)" OR DE "INUIT students" OR DE "JAPANESE-speaking students" OR DE "JEWISH students" OR DE "KOREAN-speaking students" OR DE "LESBIAN students" OR DE "LGBTQ students" OR DE "LOW-income students" OR DE "MARRIED students" OR DE "MEXICAN students" OR DE "MIDDLE Eastern students" OR DE "MIDDLE school students" OR DE "MINORITY students" OR DE "MUSLIM students" OR DE "PREGNANT students" OR DE "SCHOOL children" OR DE "SECONDARY school students" OR DE "SPANISH-speaking students" OR DE "SPECIAL needs students" OR DE "STUDENTS with disabilities" OR DE "TRANSFER students" OR DE "TRANSGENDER students"</p>
--

S3	TI (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)) OR AB (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)) OR SU (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)))	80,223
S2	TI (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR AB (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR SU (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))))	13,644
S1	TI ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))) OR AB ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))) OR SU ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))))	3,300,438

Social Work Abstracts

#	Query	Results
S12	S4 AND S5 AND S6 AND S7 AND S11	0
S11	S8 OR S9 OR S10	13,809
S10	TI ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or	13,576

<p>Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (Worcester N2 ma) or Burlington or Michigan or Detroit or Ann Arbor or East Lansing or Minnesota or Minneapolis or Rochester or St Paul or Saint Paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or Providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR AB ((Canadian* or Canada* or Canadien* or British Columbia* or Vancouver* or (Victoria* N4 bc) or Alberta* or Calgary* or Edmonton* or Saskatchewan* or Regina* or Saskatoon* or Manitoba* or Winnipeg* or Ontario* or Toronto* or Ottawa* or Thunder Bay* or ((Hamilton or London) N4 on) or Quebec* or Montreal* or New Brunswick* or Moncton* or Fredericton* or Prince Edward Island* or Charlottetown* or Nova Scotia* or Halifax* or Labrador* or Newfoundland* or ((St or Saint) N2 John*) or Nunavut* or Iqaluit* or Northwest Territory* or Yellowknife* or Yukon* or Whitehorse* or United States or USA or US or Appalachia* or Great Lakes or Great Plains or Heartland or New England or Deep South or Black Belt or Rust Belt or District of Columbia or Washington DC or Alabama or ((Birmingham or Montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (Worcester N2 ma) or Burlington or Michigan or Detroit or Ann Arbor or East Lansing or Minnesota or Minneapolis</p>

	<p>or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR SU ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (Worcester N2 ma) or Burlington or Michigan or Detroit or Ann Arbor or East Lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming))</p>	
S9	<p>TI (((south* or north* or east* or west*) N3 state*)) OR AB (((south* or north* or east* or west*) N3 state*)) OR SU (((south* or north* or east* or west*) N3 state*))</p>	342

S8	TI (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR AB (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR SU (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*)))	324
S7	TI ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR AB ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR SU ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*))	10,872
S6	TI (((harm or risk) N2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR AB (((harm or risk) N2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR SU (((harm or risk) N2 (reduc* or minim* or mitigat* or prevent* or lessen* or decreas*)))	670
S5	TI (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc) OR AB (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc) OR SU (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc)	347
S4	S1 OR S2 OR S3	31,402
S3	TI (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*))) OR AB (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*))) OR SU (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)))	614
S2	TI (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR AB (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR SU (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*)))	187
S1	TI ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female*	31,371

<p>or person* or people* or population* or individual* or adult*))) OR AB ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*))) OR SU ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*))))</p>	
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Ovid MEDLINE(R) and Epub Ahead of Print, In-Process, In-Data-Review & Other Non-Indexed Citations and Daily <1946 to December 15, 2022>

1 (youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young adj3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*))).kf,tw.2524424

2 ((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") adj3 grade*).tw,kf. 97622

3 adolescent/ or child/ or child, abandoned/ or child, adopted/ or child, exceptional/ or child, gifted/ or "child of impaired parents"/ or child, foster/ or child, orphaned/ or child, unwanted/ or disabled children/ or minors/ or adolescent fathers/ or adolescent mothers/ or adolescent, hospitalized/ or adolescent, institutionalized/ or child, hospitalized/ or child, institutionalized/ or Students/ 3137627

4 ((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*)).tw,kf. 4711

5 1 or 2 or 3 or 44321598

6 (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc).kf,tw. 127169

7 exp "marijuana use"/ or "recreational drug use"/ or Cannabis/ or Marijuana Abuse/ 23328

8 6 or 7 130317

9 (harm* or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*).kf,tw. 7924354

10 harm reduction/ or risk reduction behavior/ or risk-taking/ 46820

11 pc.fs. 1440598

12 9 or 10 or 11 8624036

13 Schools/ or education/ or curriculum/ or School Teachers/ 153751

14 (school* or junior high* or highschool* or academic* or (education* adj3 (setting* or facilit*)) or teacher* or classroom* or curricul*).kf,tw. 569246

15 13 or 14 628002

16 ((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) adj3 (state* or region*)).kf,tw. 42005

- 17 ((south* or north* or east* or west*) adj3 state*).kf,tw. 31259
- 18 (canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* adj4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) adj4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) adj John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) adj4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) adj4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough adj4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worcester adj4 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson adj4 ms) or Missouri or (Columbia adj4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or West Virginia or Wisconsin or Wyoming).kf,tw. 1692098
- 19 exp Canada/ or exp United States/ 1606433
- 20 16 or 17 or 18 or 19 2710843
- 21 5 and 8 and 12 and 15 and 20 1115
- 22 limit 21 to yr="2012 -Current" 596

Embase

No.	Query	Results
#34	#5 AND #8 AND #11 AND #14 AND #32 AND [2012-2023]/py	795
#33	#5 AND #8 AND #11 AND #14 AND #32	1242
#32	#15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31	3137439
#31	'canada'/exp OR 'united states'/exp	1593356
#30	montana:ti,ab,kw OR bozeman:ti,ab,kw OR missoula:ti,ab,kw OR nebraska:ti,ab,kw OR omaha:ti,ab,kw OR lincoln:ti,ab,kw OR nevada:ti,ab,kw OR 'las vegas':ti,ab,kw OR 'new hampshire':ti,ab,kw OR 'new jersey':ti,ab,kw OR 'new mexico':ti,ab,kw OR 'new york':ti,ab,kw OR	389357

	'north carolina':ti,ab,kw OR 'north dakota':ti,ab,kw OR ohio:ti,ab,kw OR columbus:ti,ab,kw OR cleveland:ti,ab,kw OR cincinnati:ti,ab,kw OR oklahoma:ti,ab,kw OR oregon:ti,ab,kw OR portland:ti,ab,kw OR pennsylvania:ti,ab,kw OR philadelphia:ti,ab,kw OR hershey:ti,ab,kw OR 'rhode island':ti,ab,kw OR providence:ti,ab,kw OR 'south carolina':ti,ab,kw OR 'south dakota':ti,ab,kw OR tennessee:ti,ab,kw OR nashville:ti,ab,kw OR memphis:ti,ab,kw OR texas:ti,ab,kw OR houston:ti,ab,kw OR utah:ti,ab,kw OR vermont:ti,ab,kw OR virginia:ti,ab,kw OR richmond:ti,ab,kw OR washington:ti,ab,kw OR seattle:ti,ab,kw OR wisconsin:ti,ab,kw OR wyoming:ti,ab,kw	
#29	(columbia NEAR/4 mo):ti,ab,kw	91
#28	missouri:ti,ab,kw	6855
#27	(jackson NEAR/4 ms):ti,ab,kw	184
#26	burlington:ti,ab,kw OR michigan:ti,ab,kw OR detroit:ti,ab,kw OR 'ann arbor':ti,ab,kw OR 'east lansing':ti,ab,kw OR minnesota:ti,ab,kw OR minneapolis:ti,ab,kw OR rochester:ti,ab,kw OR 'st paul':ti,ab,kw OR 'saint paul':ti,ab,kw OR mississippi:ti,ab,kw	78217
#25	(worcester NEAR/2 ma):ti,ab,kw	165
#24	maryland:ti,ab,kw OR bethesda:ti,ab,kw OR baltimore:ti,ab,kw OR rockville:ti,ab,kw OR 'johns hopkins':ti,ab,kw OR massachusetts:ti,ab,kw OR boston:ti,ab,kw OR harvard:ti,ab,kw	102851
#23	(scarborough NEAR/4 me):ti,ab,kw	19
#22	hawai*:ti,ab,kw OR honolulu:ti,ab,kw OR idaho:ti,ab,kw OR boise:ti,ab,kw OR illinois:ti,ab,kw OR chicago:ti,ab,kw OR urbana:ti,ab,kw OR evanston:ti,ab,kw OR indiana:ti,ab,kw OR indianapolis:ti,ab,kw OR 'west lafayette':ti,ab,kw OR iowa:ti,ab,kw OR kansas:ti,ab,kw OR wichita:ti,ab,kw OR kentucky:ti,ab,kw OR lexington:ti,ab,kw OR louisville:ti,ab,kw OR bardstown:ti,ab,kw OR louisiana:ti,ab,kw OR 'new orleans':ti,ab,kw OR 'baton rouge':ti,ab,kw OR shreveport:ti,ab,kw OR maine:ti,ab,kw OR orono:ti,ab,kw	99693
#21	((athens OR augusta) NEAR/4 ga):ti,ab,kw	169
#20	huntsville:ti,ab,kw OR alaska:ti,ab,kw OR anchorage:ti,ab,kw OR fairbanks:ti,ab,kw OR arizona:ti,ab,kw OR phoenix:ti,ab,kw OR tuscon:ti,ab,kw OR flagstaff:ti,ab,kw OR arkansas:ti,ab,kw OR 'little rock':ti,ab,kw OR california:ti,ab,kw OR 'los angeles':ti,ab,kw OR 'san diego':ti,ab,kw OR 'san francisco':ti,ab,kw OR berkeley:ti,ab,kw OR stanford:ti,ab,kw OR colorado:ti,ab,kw OR vail:ti,ab,kw OR denver:ti,ab,kw OR connecticut:ti,ab,kw OR farmington:ti,ab,kw OR 'new haven':ti,ab,kw OR hartford:ti,ab,kw OR delaware:ti,ab,kw OR wilmington:ti,ab,kw OR newark:ti,ab,kw OR florida:ti,ab,kw OR miami:ti,ab,kw OR gainesville:ti,ab,kw OR jacksonville:ti,ab,kw OR tampa:ti,ab,kw OR tallahassee:ti,ab,kw OR georgia:ti,ab,kw OR atlanta:ti,ab,kw	251430

#19	((birmingham OR montgomery) NEAR/4 al):ti,ab,kw	489
#18	'united states':ti,ab,kw OR usa:ti,ab,kw OR us:ti,ab,kw OR appalachia*:ti,ab,kw OR 'great lakes':ti,ab,kw OR 'great plains':ti,ab,kw OR heartland:ti,ab,kw OR 'new england':ti,ab,kw OR 'deep south':ti,ab,kw OR 'black belt':ti,ab,kw OR 'rust belt':ti,ab,kw OR 'district of columbia':ti,ab,kw OR 'washington dc':ti,ab,kw OR alabama:ti,ab,kw	1281591
#17	canadian*:ti,ab,kw OR canada*:ti,ab,kw OR canadien*:ti,ab,kw OR 'british columbia*':ti,ab,kw OR vancouver*:ti,ab,kw OR ((victoria* NEAR/4 bc):ti,ab,kw) OR alberta*:ti,ab,kw OR calgary*:ti,ab,kw OR edmonton*:ti,ab,kw OR saskatchewan*:ti,ab,kw OR regina*:ti,ab,kw OR saskatoon*:ti,ab,kw OR manitoba*:ti,ab,kw OR winnipeg*:ti,ab,kw OR ontario*:ti,ab,kw OR toronto*:ti,ab,kw OR ottawa*:ti,ab,kw OR 'thunder bay*':ti,ab,kw OR (((hamilton OR london) NEAR/4 on):ti,ab,kw) OR quebec*:ti,ab,kw OR montreal*:ti,ab,kw OR 'new brunswick*':ti,ab,kw OR moncton*:ti,ab,kw OR fredericton*:ti,ab,kw OR 'prince edward island*':ti,ab,kw OR charlottetown*:ti,ab,kw OR 'nova scotia*':ti,ab,kw OR halifax*:ti,ab,kw OR labrador*:ti,ab,kw OR newfoundland*:ti,ab,kw OR (((st OR saint) NEAR/2 john*):ti,ab,kw) OR nunavut*:ti,ab,kw OR iqaluit*:ti,ab,kw OR 'northwest territor*':ti,ab,kw OR yellowknife*:ti,ab,kw OR yukon*:ti,ab,kw OR whitehorse*:ti,ab,kw	323983
#16	((south* OR north* OR east* OR west*) NEAR/3 state*):ti,ab,kw	35229
#15	((atlantic OR midatlantic OR midwest* OR 'mid west*' OR 'north east*' OR northeast* OR 'north west*' OR northwest* OR pacific OR 'south east*' OR southeast* OR 'south west*' OR southwest*) NEAR/3 (state* OR region*)):ti,ab,kw	50853
#14	#12 OR #13	1291028
#13	'education'/de OR 'curriculum'/de OR 'education program'/de OR 'primary education'/de OR 'secondary education'/de OR 'teaching'/de OR 'course content'/de OR 'school'/de OR 'high school'/de OR 'middle school'/de OR 'primary school'/de	751319
#12	school*:ti,ab,kw OR 'junior high*':ti,ab,kw OR highschool*:ti,ab,kw OR academic*:ti,ab,kw OR ((education* NEAR/3 (setting* OR facilit*)):ti,ab,kw) OR teacher*:ti,ab,kw OR classroom*:ti,ab,kw OR curricul*:ti,ab,kw	780630
#11	#9 OR #10	11071698
#10	'risk attitude'/de OR 'risk behavior'/de OR 'risk reduction'/de OR 'risk mitigation'/de OR 'harm reduction'/de OR 'prevention'/de OR 'prevention':lnk	1683345
#9	harm*:ti,ab,kw OR reduc*:ti,ab,kw OR minim*:ti,ab,kw OR mitigat*:ti,ab,kw OR prevent*:ti,ab,kw OR lessen*:ti,ab,kw OR decreas*:ti,ab,kw	10304746
#8	#6 OR #7	173958
#7	'cannabis'/de OR 'cannabis use'/exp OR 'cannabis addiction'/de	57320

#6	cannab*:ti,ab,kw OR marijuana*:ti,ab,kw OR marihuana*:ti,ab,kw OR bhang*:ti,ab,kw OR ganja:ti,ab,kw OR edible*:ti,ab,kw OR hash:ti,ab,kw OR hashish:ti,ab,kw OR weed:ti,ab,kw OR pot:ti,ab,kw OR thc:ti,ab,kw	159030
#5	#1 OR #2 OR #3 OR #4	4902048
#4	'child'/de OR 'abandoned child'/de OR 'adopted child'/de OR 'boy'/de OR 'brain damaged child'/de OR 'child of impaired parents'/de OR 'foster child'/de OR 'gifted child'/de OR 'girl'/de OR 'handicapped child'/de OR 'hospitalized child'/de OR 'institutionalized child'/de OR 'orphaned child'/de OR 'school child'/de OR 'single parent child'/de OR 'unwanted child'/de OR 'adolescent'/exp OR 'student'/de OR 'disabled student'/de OR 'elementary student'/de OR 'high school student'/de OR 'middle school student'/de	3389451
#3	('high school':ti,ab,kw OR highschool:ti,ab,kw) AND (freshman:ti,ab,kw OR freshmen:ti,ab,kw OR sophomore*:ti,ab,kw OR junior*:ti,ab,kw OR senior*:ti,ab,kw)	5970
#2	((fourth OR fifth OR sixth OR seventh OR eighth OR ninth OR tenth OR eleventh OR twelfth OR 4th OR 5th OR 6th OR 7th OR 8th OR 9th OR 10th OR 11th OR 12th OR four OR five OR six OR seven OR eight OR nine OR ten OR eleven OR twelve OR '4' OR '5' OR '6' OR '7' OR '8' OR '9' OR '10' OR '11' OR '12') NEAR/3 grade*):ti,ab,kw	194623
#1	youth*:ti,ab,kw OR adolescen*:ti,ab,kw OR child*:ti,ab,kw OR teen*:ti,ab,kw OR 'pre teen*':ti,ab,kw OR preteen*:ti,ab,kw OR girl*:ti,ab,kw OR boy*:ti,ab,kw OR kid:ti,ab,kw OR kids:ti,ab,kw OR juvenile*:ti,ab,kw OR minors:ti,ab,kw OR 'under age*':ti,ab,kw OR underage*:ti,ab,kw OR student*:ti,ab,kw OR ((young NEAR/3 (men OR man OR woman OR women OR male* OR female* OR person* OR people* OR population* OR individual* OR adult*)):ti,ab,kw)	3275443

Scopus

((TITLE-ABS-KEY ((youth* OR adolescen* OR child* OR teen* OR pre-teen* OR preteen* OR girl* OR boy* OR kid OR kids OR juvenile* OR minors OR under-age* OR underage* OR student* OR (young W/3 (men OR man OR woman OR women OR male* OR female* OR person* OR people* OR population* OR individual* OR adult*))))) OR (TITLE-ABS-KEY (((fourth OR fifth OR sixth OR seventh OR eighth OR ninth OR tenth OR eleventh OR twelfth OR 4th OR 5th OR 6th OR 7th OR 8th OR 9th OR 10th OR 11th OR 12th OR four OR five OR six OR seven OR eight OR nine OR ten OR eleven OR twelve OR "4" OR "5" OR "6" OR "7" OR "8" OR "9" OR "10" OR "11" OR "12") W/3 grade*))) OR (TITLE-ABS-KEY (((high AND school OR highschool) AND (freshman OR freshmen OR sophomore* OR junior* OR senior*))))) AND (TITLE-ABS-KEY ((cannab* OR marijuana* OR marihuana* OR bhang* OR ganja OR hemp OR edible* OR hash OR hashish OR weed OR pot OR thc)))) AND (TITLE-ABS-KEY (((harm* OR reduc* OR minim* OR mitigat* OR prevent*

OR lessen* OR decreas*)))) AND (TITLE-ABS-KEY ((school* OR "junior high*" OR
highschool* OR academic* OR (education* W/3 (setting* OR facilit*)) OR teacher*
OR classroom* OR curricul*))) AND ((TITLE-ABS-KEY (((atlantic OR midatlantic
OR midwest* OR mid-west* OR north-east* OR northeast* OR north-west* OR
northwest* OR pacific OR south-east* OR southeast* OR south-west* OR southwest*)
W/3 (state* OR region*)))) OR (TITLE-ABS-KEY (((south* OR north* OR east*
OR west*) W/3 state*))) OR (TITLE-ABS-KEY ((canadian* OR canada* OR
canadien* OR "british columbia*" OR vancouver* OR (victoria* W/4 bc) OR alberta*
OR calgary* OR edmonton* OR saskatchewan* OR regina* OR saskatoon* OR
manitoba* OR winnipeg* OR ontario* OR toronto* OR ottawa* OR "thunder bay*" OR
((hamilton OR london) W/4 on) OR quebec* OR montreal* OR "new brunswick*" OR
moncton* OR fredericton* OR "prince edward island*" OR charlottetown* OR "nova
scotia*" OR halifax* OR labrador* OR newfoundland* OR ((st OR saint) W/2 john*)
OR nunavut* OR iqaluit* OR "northwest territor*" OR yellowknife* OR yukon* OR
whitehorse* OR "united states" OR usa OR us OR appalachia* OR "great lakes" OR
"great plains" OR heartland OR "new England" OR "deep south" OR "black belt" OR "rust
belt" OR "district of Columbia" OR "Washington dc" OR alabama OR ((birmingham OR
montgomery) W/4 al) OR huntsville OR alaska OR anchorage OR fairbanks OR arizona
OR phoenix OR tuscon OR flagstaff OR arkansas OR "little rock" OR california OR "los
angeles" OR "san diego" OR "san Francisco" OR berkeley OR stanford OR colorado OR
vail OR denver OR connecticut OR farmington OR "new haven" OR hartford OR
delaware OR wilmington OR newark OR florida OR miami OR gainesville OR
jacksonville OR tampa OR tallahassee OR georgia OR atlanta OR ((athens OR augusta)
W/4 ga) OR hawai* OR honolulu OR idaho OR boise OR illinois OR chicago OR
urbana OR evanston OR indiana OR indianapolis OR "West Lafayette" OR iowa OR
kansas OR wichita OR kentucky OR lexington OR louisville OR bardstown OR louisiana
OR "new Orleans" OR "baton rouge" OR shreveport OR maine OR orono OR ((
scarborough W/4 me) OR maryland OR bethesda OR baltimore OR rockville OR "johns
Hopkins" OR massachusetts OR boston OR harvard OR (worcester W/4 ma) OR
burlington OR michigan OR detroit OR "ann arbor" OR "east lansing" OR minnesota OR
minneapolis OR rochester OR "st paul" OR "saint paul" OR mississippi OR (jackson W/4
ms) OR missouri OR (columbia W/4 mo) OR montana OR bozeman OR missoula OR
nebraska OR omaha OR lincoln OR nevada OR "Las Vegas" OR "New Hampshire" OR
"New Jersey" OR "New Mexico" OR "New York" OR "North Carolina" OR "North
Dakota" OR ohio OR columbus OR cleveland OR cincinnati OR oklahoma OR oregon
OR portland OR pennsylvania OR philadelphia OR hershey OR "Rhode Island" OR
providence OR "South Carolina" OR "South Dakota" OR tennessee OR nashville OR
memphis OR texas OR houston OR utah OR vermont OR virginia OR richmond OR
washington OR seattle OR wisconsin OR wyoming)))) AND (LIMIT-TO (PUBYEAR ,
2023) OR LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2021) OR
LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (
PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR ,
2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR
LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012))

ERIC

#	Query	Results
S21	S5 AND S8 AND S11 AND S14 AND S19 20120101-20231231	114
S20	S5 AND S8 AND S11 AND S14 AND S19	334
S19	S15 OR S16 OR S17 OR S18	515,812
S18	DE "North Americans" OR DE "African Americans" OR DE "Alaska Natives" OR DE "Anglo Americans" OR DE "Asian Americans" OR DE "Canada Natives" OR DE "Eskimos" OR DE "French Canadians" OR DE "Hispanic Americans" OR DE "Italian Americans" OR DE "Pacific Americans" OR DE "Polish Americans"	24,538
S17	TI ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worchester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR AB ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary*	502,044

<p>or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worcester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR SU ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or</p>

	Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (Worcester N2 ma) or Burlington or Michigan or Detroit or Ann Arbor or East Lansing or Minnesota or Minneapolis or Rochester or St Paul or Saint Paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or Providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming))	
S16	TI (((south* or north* or east* or west*) N3 state*)) OR AB (((south* or north* or east* or west*) N3 state*)) OR SU (((south* or north* or east* or west*) N3 state*))	12,164
S15	TI (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR AB (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR SU (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*)))	9,487
S14	S12 OR S13	1,167,718
S13	DE "Proprietary Schools" OR DE "Religious Schools" OR DE "Bilingual Schools" OR DE "Boarding Schools" OR DE "Residential Schools" OR DE "Community Schools" OR DE "Consolidated Schools" OR DE "Correspondence Schools" OR DE "Day Schools" OR DE "Disadvantaged Schools" OR DE "Elementary Schools" OR DE "Experimental Schools" OR DE "Folk Schools" OR DE "Free Schools" OR DE "International Schools" OR DE "Laboratory Schools" OR DE "Magnet Schools" OR DE "Middle Schools" OR DE "Military Schools" OR DE "Montessori Schools" OR DE "Multiunit Schools" OR DE "Neighborhood Schools" OR DE "Open Plan Schools" OR DE "Private Schools" OR DE "Professional Development Schools" OR DE "Public Schools" OR DE "Charter Schools" OR DE "Racially Balanced Schools" OR DE "Regional Schools" OR DE "Rural Schools" OR DE "Secondary Schools" OR DE "High Schools" OR DE	358,047

	"Junior High Schools" OR DE "Single Sex Schools" OR DE "Slum Schools" OR DE "Small Schools" OR DE "Special Schools" OR DE "State Schools" OR DE "Suburban Schools" OR DE "Summer Schools" OR DE "Traditional Schools" OR DE "Urban Schools" OR DE "Virtual Schools" OR DE "Vocational Schools" OR DE "Year Round Schools" OR DE "Curriculum" OR DE "Core Curriculum" OR DE "Elementary School Curriculum" OR DE "Secondary School Curriculum" OR DE "Instruction" OR DE "Teachers" OR DE "Adult Educators" OR DE "African American Teachers" OR DE "Agriculture Teachers" OR DE "Art Teachers" OR DE "Beginning Teachers" OR DE "Bilingual Teachers" OR DE "Catholic Educators" OR DE "Cooperating Teachers" OR DE "Early Childhood Teachers" OR DE "Elementary School Teachers" OR DE "Experienced Teachers" OR DE "Family and Consumer Sciences Teachers" OR DE "Industrial Arts Teachers" OR DE "Instructor Coordinators" OR DE "Itinerant Teachers" OR DE "Language Teachers" OR DE "Lay Teachers" OR DE "Master Teachers" OR DE "Mathematics Teachers" OR DE "Middle School Teachers" OR DE "Minority Group Teachers" OR DE "Music Teachers" OR DE "Physical Education Teachers" OR DE "Preschool Teachers" OR DE "Public School Teachers" OR DE "Reading Teachers" OR DE "Remedial Teachers" OR DE "Resource Teachers" OR DE "Science Teachers" OR DE "Secondary School Teachers" OR DE "Special Education Teachers" OR DE "Student Teachers" OR DE "Substitute Teachers" OR DE "Teacher Interns" OR DE "Teacher Researchers" OR DE "Television Teachers" OR DE "Tutors" OR DE "Vocational Education Teachers" OR DE "White Teachers" OR DE "Writing Teachers"	
S12	TI ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR AB ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR SU ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*))	1,162,614
S11	S9 OR S10	167,159
S10	DE "Risk" OR DE "Prevention"	27,693
S9	TI (((harm or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR AB (((harm or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR SU (((harm or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*)))	159,640
S8	S6 OR S7	4,302
S7	DE "Marijuana"	1,160
S6	TI (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc) OR AB (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc) OR SU (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc)	4,302
S5	S1 OR S2 OR S3 OR S4	1,198,340

S4	DE "Youth" OR DE "Disadvantaged Youth" OR DE "Out of School Youth" OR DE "Rural Youth" OR DE "Urban Youth" OR DE "Adolescents" OR DE "Children" OR DE "African American Children" OR DE "Grandchildren" OR DE "Hospitalized Children" OR DE "Latchkey Children" OR DE "Migrant Children" OR DE "Minority Group Children" OR DE "Preadolescents" OR DE "Early Adolescents" OR DE "Late Adolescents" OR DE "Students" OR DE "Advanced Students" OR DE "African American Students" OR DE "American Indian Students" OR DE "Asian American Students" OR DE "Bilingual Students" OR DE "Elementary School Students" OR DE "Foreign Students" OR DE "Hispanic American Students" OR DE "Low Income Students" OR DE "Middle School Students" OR DE "Minority Group Students" OR DE "Pregnant Students" OR DE "Secondary School Students" OR DE "High School Students" OR DE "Junior High School Students" OR DE "Self Supporting Students" OR DE "Special Needs Students" OR DE "Student Athletes" OR DE "Students with Disabilities" OR DE "Terminal Students" OR DE "Transfer Students" OR DE "White Students" OR DE "Grade 10" OR DE "Grade 11" OR DE "Grade 12" OR DE "Grade 4" OR DE "Grade 5" OR DE "Grade 6" OR DE "Grade 7" OR DE "Grade 8" OR DE "Grade 9" OR DE "Intermediate Grades"	330,351
S3	TI (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR AB (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR SU (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*)))	55,989
S2	TI (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*))) OR AB (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*))) OR SU (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)))	102,399
S1	TI ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))) OR AB ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))) OR SU ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age*	1,185,271

	or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*))))	
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PsycINFO

#	Query	Results
S20	S3 AND S8 AND S11 AND S14 AND S18 2012-2023	470
S19	S3 AND S8 AND S11 AND S14 AND S18	883
S18	S15 OR S16 OR S17	728,257
S17	TI ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worcester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR AB ((canadian* or canada* or canadien* or	721,650

<p> british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worchester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR SU ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los </p>	
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	angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (Worcester N2 ma) or Burlington or Michigan or Detroit or Ann Arbor or East Lansing or Minnesota or Minneapolis or Rochester or St Paul or Saint Paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or Providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming))	
S16	TI (((south* or north* or east* or west*) N3 state*)) OR AB (((south* or north* or east* or west*) N3 state*)) OR SU (((south* or north* or east* or west*) N3 state*))	15,451
S15	TI (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR AB (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR SU (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*)))	17,680
S14	S12 OR S13	760,947
S13	DE "Academic Settings" OR DE "Boarding Schools" OR DE "Charter Schools" OR DE "Elementary Schools" OR DE "High Schools" OR DE "Institutional Schools" OR DE "Junior High Schools" OR DE "Middle Schools" OR DE "Nongraded Schools" OR DE "Schools"	63,298
S12	TI ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR AB ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR SU ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*))	760,947
S11	S9 OR S10	1,062,696
S10	(DE "Harm Reduction") OR (DE "Risk Taking") OR DE "Prevention"	54,133

S9	TI (((harm* or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR AB (((harm* or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR SU (((harm* or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*)))	1,053,254
S8	S4 OR S5 OR S6 OR S7	1,874,977
S7	TI (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*))) OR AB (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*))) OR SU (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)))	81,172
S6	DE "Early Adolescence" OR DE "Puberty" OR DE "Child Characteristics" OR DE "Childhood Development" OR DE "Child Behavior" OR DE "Adolescent Development" OR DE "Adolescent Behavior" OR DE "Adolescent Characteristics" OR DE "Student Attitudes" OR DE "Students" OR DE "Elementary School Students" OR DE "Intermediate School Students" OR DE "Primary School Students" OR DE "High School Students" OR DE "International Students" OR DE "Junior High School Students" OR DE "Middle School Students" OR DE "Student Characteristics" OR DE "Grade Level"	340,116
S5	TI (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR AB (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR SU (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*)))	25,157
S4	TI ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))) OR AB ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))) OR SU ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*))))	1,866,622
S3	S1 OR S2	33,301

S2	DE "Hashish" OR DE "Tetrahydrocannabinol" OR DE "Cannabis" OR DE "Cannabidiol" OR DE "Marijuana" OR DE "Marijuana Usage" OR DE "Cannabis Use Disorder"	13,143
S1	TI (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or the) OR AB (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or the) OR SU (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or the)	33,194

Academic Search Complete

#	Query	Results
S20	S5 AND S8 AND S11 AND S14 AND S18	472
S19	S5 AND S8 AND S11 AND S14 AND S18	772
S18	S15 OR S16 OR S17	7,073,882
S17	TI ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worcester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or	7,003,273

<p>New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR AB ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (Worcester N2 ma) or Burlington or Michigan or Detroit or Ann Arbor or East Lansing or Minnesota or Minneapolis or Rochester or St Paul or Saint Paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming)) OR SU ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or</p>	
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	Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worcester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or Wisconsin or Wyoming))	
S16	TI (((south* or north* or east* or west*) N3 state*)) OR AB (((south* or north* or east* or west*) N3 state*)) OR SU (((south* or north* or east* or west*) N3 state*))	93,983
S15	TI (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR AB (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR SU (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*)))	85,211
S14	S12 OR S13	1,622,720
S13	DE "SCHOOLS" OR DE "AFRICAN American schools" OR DE "ALTERNATIVE schools" OR DE "BILINGUAL schools" OR DE "BOARDING schools" OR DE "CHARTER schools" OR DE "COEDUCATIONAL schools" OR DE "CORRESPONDENCE schools &	287,935

<p>courses" OR DE "DAY schools" OR DE "DISADVANTAGED schools" OR DE "EFFECTIVE schools" OR DE "ELEMENTARY schools" OR DE "ETHNIC schools" OR DE "FAILING schools" OR DE "LGBTQ schools" OR DE "PRIMARY schools" OR DE "PRIVATE schools" OR DE "PUBLIC schools" OR DE "RELIGIOUS schools" OR DE "RURAL schools" OR DE "SECONDARY schools" OR DE "SINGLE sex schools" OR DE "SMALL schools" OR DE "SUBURBAN schools" OR DE "SUMMER schools" OR DE "TRADITIONAL schools" OR DE "URBAN schools" OR DE "VIRTUAL schools" OR DE "YEAR-round schools" OR DE "AFTER school programs" OR DE "TEACHERS" OR DE "ACTORS as teachers" OR DE "ADULT educators" OR DE "AFRICAN American artists as teachers" OR DE "AFRICAN American teachers" OR DE "AGRICULTURE teachers" OR DE "ALEXANDER technique teachers" OR DE "ANTHROPOLOGY teachers" OR DE "ARCHAEOLOGY teachers" OR DE "ARCHITECTURE teachers" OR DE "ARTISTS as teachers" OR DE "ARTS teachers" OR DE "AUTHORS as teachers" OR DE "AUTOMOBILE driver education teachers" OR DE "BEGINNING teachers" OR DE "BILINGUAL teachers" OR DE "BLACK teachers" OR DE "BUSINESS teachers" OR DE "BUSINESSPEOPLE as teachers" OR DE "CHEMISTRY teachers" OR DE "CHILDREN as teachers" OR DE "CHILDREN of teachers" OR DE "CHRISTIAN teachers" OR DE "COLLEGE teachers" OR DE "COMMUNICATION teachers" OR DE "COMMUNIST teachers" OR DE "COOPERATING teachers" OR DE "COSMETOLOGY teachers" OR DE "DISTANCE education teachers" OR DE "EARLY childhood teachers" OR DE "ECONOMICS teachers" OR DE "ELEMENTARY school teachers" OR DE "ENGINEERING teachers" OR DE "EXPERIENCED teachers" OR DE "FILM teachers" OR DE "FINANCE teachers" OR DE "FLOATING teachers" OR DE "FOREIGN teachers" OR DE "FORESTRY teachers" OR DE "GAY teachers" OR DE "GENEALOGY teachers" OR DE "GOLF instructors" OR DE "GOVERNESSES" OR DE "HEALTH education teachers" OR DE "HETEROSEXUAL teachers" OR DE "HIGH school teachers" OR DE "HISPANIC American teachers" OR DE "HISTORY teachers" OR DE "HOME economics teachers" OR DE "HOME room teachers" OR DE "IMAMS (Mosque officers) as teachers" OR DE "INDUSTRIAL arts teachers" OR DE "INFORMATION science teachers" OR DE "ITINERANT teachers" OR DE "JEWISH teachers" OR DE "JOURNALISM teachers" OR DE "JOURNALISTS as teachers" OR DE "JUNIOR high school teachers" OR DE "KARATE teachers" OR DE "KINDERGARTEN teachers" OR DE "LANGUAGE arts teachers" OR DE "LANGUAGE teachers" OR DE "LAW teachers" OR DE "LAY teachers" OR DE "LEAD teachers" OR DE "LGBTQ+ teachers" OR DE "LIBRARIES & teachers" OR DE "LIBRARY media specialists" OR DE "LIBRARY orientation for teachers" OR DE "LIBRARY science teachers" OR DE "LINGUISTICS teachers" OR DE "LITERATURE teachers" OR DE "LUTHERAN teachers" OR DE "MALE teachers" OR DE "MASTER</p>	
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	<p>teachers" OR DE "MATHEMATICS teachers" OR DE "MEDICAL teaching personnel" OR DE "MEXICAN American teachers" OR DE "MIDDLE school teachers" OR DE "MINORITY teachers" OR DE "MUSLIM teachers" OR DE "NATIVE American teachers" OR DE "NUNS as public school teachers" OR DE "NURSE educators" OR DE "PARENTS as teachers" OR DE "PART-time teachers" OR DE "PHILOSOPHY teachers" OR DE "PHYSICAL education teachers" OR DE "POETS as teachers" OR DE "PREPARATORY school teachers" OR DE "PRESCHOOL teachers" OR DE "PRIVATE school teachers" OR DE "PROBATIONARY teachers" OR DE "PSYCHOLOGY teachers" OR DE "PUBLIC school teachers" OR DE "PUBLIC speaking teachers" OR DE "READING teachers" OR DE "REMEDIAL teachers" OR DE "RESOURCE teachers" OR DE "RETIRED teachers" OR DE "SCIENCE teachers" OR DE "SCIENTISTS as teachers" OR DE "SECONDARY school teachers" OR DE "SELF-efficacy in teachers" OR DE "SEX educators" OR DE "SOCIAL science teachers" OR DE "SOCIAL work teachers" OR DE "SOCIAL workers as teachers" OR DE "SPECIAL education teachers" OR DE "STUDENT teachers" OR DE "SUBSTITUTE teachers" OR DE "SUNDAY school teachers" OR DE "TEACHER coordinators" OR DE "TEACHER effectiveness" OR DE "TEACHER researchers" OR DE "TEACHER supervisors" OR DE "TEACHER transfer" OR DE "TEACHERS & community" OR DE "TEACHERS as astronauts" OR DE "TEACHERS as authors" OR DE "TEACHERS in art" OR DE "TEACHERS of brain-damaged children" OR DE "TEACHERS of children with mental disabilities" OR DE "TEACHERS of deafblind people" OR DE "TEACHERS of homeless children" OR DE "TEACHERS of problem children" OR DE "TEACHERS of the blind" OR DE "TEACHERS of the deaf" OR DE "TEACHERS with disabilities" OR DE "TEACHERS' assistants" OR DE "TEACHERS' backgrounds" OR DE "TECHNICAL education teachers" OR DE "TECHNOLOGY teachers" OR DE "VISITING professors" OR DE "VOCATIONAL teachers" OR DE "WHITE teachers" OR DE "WOMEN teachers" OR DE "YOGA teachers" OR DE "CURRICULUM" OR OR DE "ELEMENTARY education" OR DE "MIDDLE school education" OR DE "SECONDARY education" OR DE "TEACHING" OR DE "ELEMENTARY school teaching" OR DE "HIGH school teaching" OR DE "JUNIOR high school teaching" OR DE "MIDDLE school teaching" OR DE "PRIMARY school teaching"</p>	
S12	<p>TI ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR AB ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR SU ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*))</p>	1,604,611
S11	S9 OR S10	6,753,234

S10	DE "HARM reduction" OR DE "RISK-taking behavior" OR DE "PREVENTION" OR DE "DRUG abuse prevention" OR DE "SUBSTANCE abuse prevention"	124,872
S9	TI (((harm* or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR AB (((harm* or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR SU (((harm* or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*)))	6,743,385
S8	S6 OR S7	205,042
S7	DE "BHANG (Drug)" OR DE "MARIJUANA" OR DE "MARIJUANA abuse" OR DE "SYNTHETIC marijuana" OR DE "MARIJUANA smoke" OR DE "HASHISH" OR DE "CANNABIS" OR DE "CANNABIS edibles" OR DE "MARIJUANA & society"	15,214
S6	TI (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc) OR AB (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc) OR SU (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or thc)	204,757
S5	S1 OR S2 OR S3 OR S4	3,420,822
S4	DE "ABUSED children" OR DE "ADOPTED children" OR DE "ASIAN children" OR DE "BLACK children" OR DE "BOYS" OR DE "BUDDHIST children" OR DE "CHILD acrobats" OR DE "CHILD actors" OR DE "CHILD artists" OR DE "CHILD beauty pageant contestants" OR DE "CHILD circus performers" OR DE "CHILD dancers" OR DE "CHILD development" OR DE "CHILD filmmakers" OR DE "CHILD painters" OR DE "CHILD patients" OR DE "CHILD photographers" OR DE "CHILD prostitutes" OR DE "CHILD saints" OR DE "CHILDREN of abused wives" OR DE "CHILDREN of attention-deficit-disordered parents" OR DE "CHILDREN of bisexual parents" OR DE "CHILDREN of divorced parents" OR DE "CHILDREN of foreign workers" OR DE "CHILDREN of gay parents" OR DE "CHILDREN of governors" OR DE "CHILDREN of heterosexual parents" OR DE "CHILDREN of immigrants" OR DE "CHILDREN of intercountry marriage" OR DE "CHILDREN of interethnic marriage" OR DE "CHILDREN of interfaith marriage" OR DE "CHILDREN of migrant laborers" OR DE "CHILDREN of minorities" OR DE "CHILDREN of mixed orientation marriages" OR DE "CHILDREN of older parents" OR DE "CHILDREN of parents with disabilities" OR DE "CHILDREN of prostitutes" OR DE "CHILDREN of royalty" OR DE "CHILDREN of school principals" OR DE "CHILDREN of single parents" OR DE "CHILDREN of spies" OR DE "CHILDREN of teenage mothers" OR DE "CHILDREN of the rich" OR DE "CHILDREN of unemployed parents" OR DE "CHILDREN of unmarried parents" OR DE "CHILDREN of working parents" OR DE "CHILDREN with dwarfism" OR DE "CHILDREN with mental illness" OR DE "CHRISTIAN children" OR DE "CITY children" OR DE "DEAFBLIND children" OR DE "DEPORTED children" OR DE "FIRST-born children" OR DE "FOSTER children" OR	486,970

<p>DE "GIRLS" OR DE "GRANDCHILDREN" OR DE "HINDU children" OR DE "HIV-positive children" OR DE "HOMELESS children" OR DE "IMMIGRANT children" OR DE "INDIGENOUS children" OR DE "INTERSEX children" OR DE "JEWISH children" OR DE "MEDICALLY uninsured children" OR DE "MIDDLE children" OR DE "MISSING children" OR DE "MULTIRACIAL children" OR DE "MUSLIM children" OR DE "ONLY child" OR DE "ORPHANS" OR DE "OVERWEIGHT children" OR DE "POOR children" OR DE "PROBLEM children" OR DE "REFUGEE children" OR DE "ROMANI children" OR DE "RUNAWAY children" OR DE "RURAL children" OR DE "SCHOOL children" OR DE "SECOND-born children" OR DE "SICK children" OR DE "STEPCHILDREN" OR DE "STREET children" OR DE "SUBURBAN children" OR DE "THIRD culture children" OR DE "TORRES Strait Islander children" OR DE "TRANSGENDER children" OR DE "UNWANTED children" OR DE "VAGRANT children" OR DE "VEGETARIAN children" OR DE "WHITE children" OR DE "YOUNGEST child" OR DE "ABUSED teenagers" OR DE "BLACK teenagers" OR DE "CHRISTIAN teenagers" OR DE "EXCEPTIONAL teenagers" OR DE "GAY teenagers" OR DE "GIFTED teenagers" OR DE "HIV-positive teenagers" OR DE "HOMELESS teenagers" OR DE "JEWISH teenagers" OR DE "LGBTQ teenagers" OR DE "MINORITY teenagers" OR DE "MUSLIM teenagers" OR DE "NATIVE American teenagers" OR DE "OVERWEIGHT teenagers" OR DE "POOR teenagers" OR DE "RURAL teenagers" OR DE "SEXUALLY abused teenagers" OR DE "SUBURBAN teenagers" OR DE "TEENAGE artists" OR DE "TEENAGE boys" OR DE "TEENAGE businesspeople" OR DE "TEENAGE girls" OR DE "TEENAGE immigrants" OR DE "TEENAGE parents" OR DE "TEENAGE photographers" OR DE "TEENAGE refugees" OR DE "TEENAGERS with disabilities" OR DE "TEENAGERS with mental illness" OR DE "URBAN teenagers" OR DE "HIGH school students" OR DE "PRETEENS" OR DE "MINORS" OR DE "AT-risk youth" OR DE "BISexual youth" OR DE "BLACK youth" OR DE "BUDDHIST youth" OR DE "CHRISTIAN youth" OR DE "DEAF youth" OR DE "HIV-positive youth" OR DE "HOMELESS youth" OR DE "INDIGENOUS youth" OR DE "JEWISH youth" OR DE "JUVENILE offenders" OR DE "LGBTQ youth" OR DE "MINORITY youth" OR DE "MUSLIM youth" OR DE "NATIVE American youth" OR DE "PALESTINIAN youth" OR DE "POOR youth" OR DE "PROBLEM youth" OR DE "QUESTIONING youth" OR DE "ROMANI youth" OR DE "RUNAWAY teenagers" OR DE "RURAL youth" OR DE "SCHOOL dropouts" OR DE "SCOUTS (Youth organization members)" OR DE "SIKH youth" OR DE "STREET youth" OR DE "UNEMPLOYED youth" OR DE "URBAN youth" OR DE "WHITE youth" OR DE "YOUNG inventors" OR DE "YOUTH with disabilities" OR DE "YOUTH with mental illness" OR DE "YOUTH" OR DE "ADOLESCENCE" OR DE "CHILDREN" OR DE "TEENAGERS" OR DE "STUDENTS" OR DE</p>	
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	"ADVANCED students" OR DE "AMERICAN students" OR DE "ARAB students" OR DE "ARABIC-speaking students" OR DE "ASIAN students" OR DE "BILINGUAL students" OR DE "BISEXUAL students" OR DE "BLACK students" OR DE "CANADIAN students" OR DE "CHINESE-speaking students" OR DE "CHRISTIAN students" OR DE "EDUCATIONALLY disadvantaged students" OR DE "FRENCH-Canadian students" OR DE "FRENCH-speaking students" OR DE "GAY students" OR DE "HOMELESS students" OR DE "IMMIGRANT students" OR DE "INDIAN students (Asians)" OR DE "INUIT students" OR DE "JAPANESE-speaking students" OR DE "JEWISH students" OR DE "KOREAN-speaking students" OR DE "LESBIAN students" OR DE "LGBTQ students" OR DE "LOW-income students" OR DE "MARRIED students" OR DE "MEXICAN students" OR DE "MIDDLE Eastern students" OR DE "MIDDLE school students" OR DE "MINORITY students" OR DE "MUSLIM students" OR DE "PREGNANT students" OR DE "SCHOOL children" OR DE "SECONDARY school students" OR DE "SPANISH-speaking students" OR DE "SPECIAL needs students" OR DE "STUDENTS with disabilities" OR DE "TRANSFER students" OR DE "TRANSGENDER students"	
S3	TI (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)) OR AB (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)) OR SU (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*))	82,085
S2	TI (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR AB (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR SU (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*)))	13,941
S1	TI ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*))))) OR AB ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*))))) OR SU ((youth* or adolescen* or child* or teen*	3,370,125

	or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))	
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Social Work Abstracts

#	Query	Results
S13	S4 AND S5 AND S6 AND S7 AND S11	1
S12	S4 AND S5 AND S6 AND S7 AND S11	12
S11	S8 OR S9 OR S10	13,813
S10	TI ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (worcester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or West Virginia or Wisconsin or Wyoming)) OR AB ((canadian* or canada* or	13,579

<p>canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (Worcester N2 ma) or Burlington or Michigan or Detroit or ann arbor or east lansing or Minnesota or Minneapolis or Rochester or st paul or saint paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or West Virginia or Wisconsin or Wyoming)) OR SU ((canadian* or canada* or canadien* or british columbia* or vancouver* or (Victoria* N4 bc) or alberta* or calgary* or edmonton* or saskatchewan* or regina* or saskatoon* or manitoba* or winnipeg* or ontario* or toronto* or ottawa* or thunder bay* or ((hamilton or london) N4 on) or quebec* or montreal* or new brunswick* or Moncton* or Fredericton* or prince edward island* or Charlottetown* or nova scotia* or Halifax* or labrador* or newfoundland* or ((St or Saint) N2 John*) or nunavut* or Iqaluit* or northwest territor* or Yellowknife* or yukon* or Whitehorse* or united states or usa or us or Appalachia* or great lakes or great plains or heartland or new england or deep south or black belt or rust belt or district of Columbia or Washington dc or Alabama or ((Birmingham or montgomery) N4 al) or Huntsville or Alaska or anchorage or fairbanks or Arizona or Phoenix or Tuscon or Flagstaff or Arkansas or little rock or California or los angeles or</p>	
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	san diego or san Francisco or Berkeley or Stanford or Colorado or Vail or Denver or Connecticut or Farmington or new haven or Hartford or Delaware or Wilmington or Newark or Florida or Miami or Gainesville or Jacksonville or Tampa or Tallahassee or Georgia or Atlanta or ((Athens or Augusta) N4 ga) or Hawai* or Honolulu or Idaho or Boise or Illinois or Chicago or Urbana or Evanston or Indiana or Indianapolis or West Lafayette or Iowa or Kansas or Wichita or Kentucky or Lexington or Louisville or Bardstown or Louisiana or new Orleans or baton rouge or Shreveport or Maine or Orono or (Scarborough N4 me) or Maryland or Bethesda or Baltimore or Rockville or Johns Hopkins or Massachusetts or Boston or Harvard or (Worcester N2 ma) or Burlington or Michigan or Detroit or Ann Arbor or East Lansing or Minnesota or Minneapolis or Rochester or St Paul or Saint Paul or Mississippi or (Jackson N4 ms) or Missouri or (Columbia N4 mo) or Montana or Bozeman or Missoula or Nebraska or Omaha or Lincoln or Nevada or Las Vegas or New Hampshire or New Jersey or New Mexico or New York or North Carolina or North Dakota or Ohio or Columbus or Cleveland or Cincinnati or Oklahoma or Oregon or Portland or Pennsylvania or Philadelphia or Hershey or Rhode Island or Providence or South Carolina or South Dakota or Tennessee or Nashville or Memphis or Texas or Houston or Utah or Vermont or Virginia or Richmond or Washington or Seattle or West Virginia or Wisconsin or Wyoming))	
S9	TI (((south* or north* or east* or west*) N3 state*)) OR AB (((south* or north* or east* or west*) N3 state*)) OR SU (((south* or north* or east* or west*) N3 state*))	343
S8	TI (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR AB (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*))) OR SU (((atlantic or midatlantic or midwest* or mid-west* or north-east* or northeast* or north-west* or northwest* or pacific or south-east* or southeast* or south-west* or southwest*) N3 (state* or region*)))	326
S7	TI ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR AB ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*)) OR SU ((school* or junior high* or highschool* or academic* or (education* N3 (setting* or facilit*)) or teacher* or classroom* or curricul*))	10,880
S6	TI (((harm* or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR AB (((harm* or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*))) OR SU (((harm* or reduc* or minim* or mitigat* or prevent* or lessen* or decreas*)))	11,518
S5	TI (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or the) OR AB (cannab* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or	348

	hashish or weed or pot or the) OR SU (cannabis* or marijuana* or marihuana* or bhang* or ganja or hemp or edible* or hash or hashish or weed or pot or the)	
S4	S1 OR S2 OR S3	31,418
S3	TI (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)) OR AB (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*)) OR SU (((fourth or fifth or sixth or seventh or eighth or ninth or tenth or eleventh or twelfth or 4th or 5th or 6th or 7th or 8th or 9th or 10th or 11th or 12th or four or five or six or seven or eight or nine or ten or eleven or twelve or "4" or "5" or "6" or "7" or "8" or "9" or "10" or "11" or "12") N3 grade*))	613
S2	TI (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR AB (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*))) OR SU (((high school or highschool) and (freshman or freshmen or sophomore* or junior* or senior*)))	189
S1	TI ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))) OR AB ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*)))) OR SU ((youth* or adolescen* or child* or teen* or pre-teen* or preteen* or girl* or boy* or kid or kids or juvenile* or minors or under-age* or underage* or student* or (young N3 (men or man or woman or women or male* or female* or person* or people* or population* or individual* or adult*))))	31,387

Appendix B

Educator focus group interview guide

Exploring Educator Perspectives Toward Teaching Substance Use Education in the Classroom

Overarching Goal

The purpose of this study is to gain a better understanding of educators' perspectives toward teaching substance use education and dealing with substance-related issues in the school setting.

Objectives:

1. Explore educator experiences with student substance use
2. Explore educator perspectives toward delivering substance use education
3. Explore educator professional development needs in preparation for delivering substance use education to students
4. Explore educators' perspectives on effective evaluation methods and limitations to evaluating skill-based learning among students

Discussion Questions (1st breakout):

1. What situations do you commonly encounter with students regarding substance use?
 - a. How do you deal with these concerns?
 - b. What kind of pre-existing knowledge and experience of substance use are students bringing to the classroom?
 - c. What are your thoughts about teaching students to make safe choices regarding using substances?
2. What are your thoughts on the DECYDE website to help teachers deliver the substance use health education in the classroom?
 - a. E.g., Lesson plans, infographics, Fact Sheets,
 - b. How will the teachers use the website? (content, scenarios, interactive elements, videos)
 - c. How do we ensure that all teachers are aware of the website and can avail of the resources?
3. What kinds of things would you like to see on a substance use education website for teachers?
 - a. Teacher portal: Lesson plans, interactive, infographics, fact sheets,

- b. Supports/Resources for teachers (eg external links to community resources)
 - c. Students portal / Parent Portal
4. How do we promote the website and resources to all teachers?
 - a. What would encourage administrators to promote the website with their teachers?
 - b. How can we identify teachers or schools who are willing to pilot our lesson plans?

Discussion Questions (2nd breakout):

1. What aspects of substance use education and student supports would you like more training on?
 - a. What aspects of substance use education?
 - b. What supports do you need for students who use substance use?
 - c. What types of resources/materials would you like to receive?
 - i. E.g., *training on spotting the warning signs of substance use, how to effectively address substance use issues with students, harm reduction*
2. How would you like to receive educator training to prepare you to teach about substance use? (OR: How would we make this educator training accessible to teachers, so they are prepared to deliver content and support students about substance use?)
 - a. In-person, online, synchronously, asynchronously
 - b. What would entice you to attend professional development outside of work hours?
3. What evaluation methods do you use, other than traditional methods like tests, quizzes, exams?
 - a. What methods do you find most effective for assessing outcomes?
 - b. What methods do you feel are least effective?
 - c. What evaluation methods are students most receptive to?
 - d. What methods are students least engaged with?
4. What are the strengths and limitations in evaluation methods used for assessing health or substance use outcomes?
 - a. Probe: group based, individual, in-person, virtual, etc,
 - b. How do we determine whether the students are meeting the outcomes? (e.g. rubric, checklist, observation, standards-based)
5. How do the evaluation methods differ between different types of students?
 - a. E.g., rural/urban, developmental stages, minorities, at-risk youth, gender identity, location?

- b. How do you adjust your evaluation in the classroom based on students' varying needs and strengths?

Analysis:

We will use a thematic approach to analyze the transcripts. Research team members will code interviews according to the most salient themes emerging across the interviews using inductive line-by-line coding. Constant comparison will also be used to examine relationships; focused and theoretical coding will be used to develop core themes.