Intersectoral Interventions in School to Develop Strategies to Prevent the Use of Alcohol and Other Drugs: A Scoping Review

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Abstract
It is important to prioritize intersectoral action at schools to prevent the use of alcohol and other drugs. This strategic act should be organized with multidisciplinary learning characteristics and with the involvement of different stakeholders. The aim of a recent scoping review was to identify the factors that benefit and hinder intersectoral actions at school resulting from the elaboration of policies to prevent drug use. It seems like the research study was a scoping review that used the P-population, C-context, and C-concept structure. The study searched for information in various databases like Embase, Proquest, Lilacs, Medline via Pubmed, PsycInfo, WHO-Iris, and PAHO-Iris on April 17, 2023. According to the results, there were 5 studies that were eligible to answer the research question. One of the advantages of intersectoral actions is the role of schools in creating a support network with different social actors, particularly with family involvement. On the other hand, one of the challenges is inconsistencies in legal regulations, which do not provide enough guidance to schools on how to prevent alcohol and drug use. While public and private schools may be affected differently by social and economic factors, it is essential to invest in developing policies that focus on drug prevention for children and adolescents who are learning in schools.

Keywords: school, street drugs, intersectoral collaboration, policy making

1. Introduction
The importance of public policies to combat drug consumption is closely related to the social, economic, and cultural model outlined by the State (Höfling, 2001). It is crucial to involve young people in the formulation of these policies, given that education plays a fundamental role in their development. Schools are an excellent place for preventive actions against drug use since they provide an environment that reinforces scientific thinking and its practical application in the community (Takeiti & Vicentin, 2015). Adolescence is a time when there is a higher retention rate in school, and it is also when a large number of drug experimentation cases occur. Therefore, schools have a significant role to play in instilling critical thinking and reflection on values that can
help reduce risk factors and reinforce protective factors regarding drug use (Novaes, 2009). Intersectoral action in schools involves a strategic management process in primary care that incorporates the principles of territory, regionalization, and comprehensive healthcare. It should be organized in collaboration with education, health, and other sectors, considering the complexity of drug use and its impact as a public health issue. Intersectoral actions in schools are crucial for developing policies that prevent the use of alcohol and other drugs. They are structured through integrated management and applied to the exchange of collective knowledge, practices, and languages (Csete, 2016). This approach encompasses diverse knowledge and planning and has multidisciplinary learning characteristics that improve specific policy performance issues.

Intersectoral actions at school are crucial for developing policies to prevent the use of alcohol and other drugs. These actions are structured through integrated management and involve collective exchange of knowledge, practices, and languages (Csete, 2016).

The development of health promotion with a health education interface should be based on the principle of intersectoral and social participation. It is essential to give priority to health conditions and determinants to coordinate concrete actions by policymakers to achieve effective health responses in the context of alcohol and drug abuse, and to promote healthy lifestyles. It's worth mentioning that sociodemographic and economic factors such as gender, income, age group, race/color, and housing play a crucial role in drug use and abuse and have significant physical, psychological, and social implications (Teixeira, 2017).

As per the World Health Organization (WHO), addiction to alcohol and other drugs is a chronic ailment (WHO, 2010). Therefore, it is necessary to adopt an inclusive approach towards drug prevention that involves health education promotion by the government, civil societies, Non-Governmental Organizations (NGOs), managers, health professionals, education, social assistance, public security, and representatives of people who use drugs. This approach will ensure cooperation not only in the prevention of drug use but also in providing support, mutual help, treatment, and recovery for social reintegration (Teixeira, 2015).

Intersectoral actions at school that involve alcohol and other drug prevention policies should be consolidated in a guiding way for decision-making. This is important because the health-illness process can interfere with various aspects of formulating intersectoral actions at school. Therefore, it is necessary to establish co-participation in school management, improve health service techniques, and provide a better quality of life for people who use alcohol and other drugs (Petersen, 2016).

Preventing the use of alcohol and other drugs is a challenging policy that requires collaboration from different sectors and areas. It is aimed at providing care through practical and theoretical foundations in the fields of education and health promotion, without any stigma, prejudice or prohibitionist or coercive preventive approaches (Abdel-Baki, 2019). The main objective of the study is to identify the factors that hinder or benefit intersectoral actions at school for developing policies to prevent the use of alcohol and other drugs.

2. Method

2.1 Study Design

This is a scoping review that aims to comprehensively map scientific literature and synthesize findings related to policies for preventing the use of alcohol and other drugs. Scoping reviews, according to Peters et al. (2015), are a promising method for diagnosing technologies and synthesizing evidence to strengthen health policies. This study was registered on the international Open Science Framework (OSF) platform with a DOI number of 10.17605/OSF.IO/KNJ4Y and can be accessed through the provided link: https://osf.io/knj4y/.

This is a descriptive study with a qualitative approach, and data is obtained from secondary sources. The research aims to find scientific, cultural, social, political, and economic contributions related to drug prevention at schools to better understand the real problem being researched (Cervo & Bervian, 2002).

2.2 Eligibility Criteria

Inclusion criteria for this study are primary articles, systematic, integrative or narrative review articles with or without meta-analysis, reports articles, monographs, dissertations and theses without temporal restrictions in any language. These articles should address the factors that benefit and hinder intersectoral actions at school for the elaboration of policies to prevent the use of alcohol and other drugs.

Exclusion criteria are incomplete texts, editorials, conference proceedings, newspaper comments, case reports, monographs, dissertations, and partially published theses. Also, those articles that exclusively addressed political and economic aspects or clinical and genetic aspects associated with drugs will be excluded.
2.3 Search in Databases
The research question for this project was based on the acronym PCC, which stands for Population, Context (geographic, sociocultural or related to a specific environment), and Concept (intervention, phenomenon of interest and outcomes). The question was, “What are the factors that promote intersectoral actions in the development of policies to prevent the use of alcohol and other drugs in schools?” To identify relevant literature, the Health Sciences Descriptors – DeCS and synonyms in the Medical Subject Headings – MeSH were gathered in Portuguese, English, and Spanish from the title, abstract, and keywords of studies, as shown in Table 1. Scientific literature was then searched for in databases such as PubMed, PsycInfo, BDENF – Enfermagem, LILACS, PAHO-IRIS, IBECS, PROQUEST, Cochrane, Embase, PQD-Evidence, Web of Science, and SCOPUS on April 17, 2023.

Table 1. Descriptors that are defined by the acronym PCC

<table>
<thead>
<tr>
<th>PCC</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context</td>
<td>The process of formulating policies to prevent and control drug abuse.</td>
</tr>
<tr>
<td>Concept</td>
<td>Intersectoral actions</td>
</tr>
</tbody>
</table>

Source: Prepared by the authors.

2.4 Data Extraction and Analysis
To manage the articles and avoid repetition, we utilized version 1.18 of the Mendeley reference manager. To select the articles for our study, we employed the Rayyan QCRI platform (https://rayyan.qcri.org), which allowed two independent researchers (A.M.A and J.M.G) to read the article titles and abstracts. Any discrepancies were resolved by a third researcher (L.F.C.). Data extraction was carried out by two reviewers (A.M.A and J.M.G) independently, using a Microsoft Excel 2016 extraction form. Any disagreements were resolved through consensus with a third researcher (L.F.C.). If necessary, we contacted the authors of the chosen articles to obtain additional information.

The analysis of published articles has taken into consideration several variables such as author/year, country, social actors involved in intersectoral actions, study design, drugs covered, population, total sample size (N), intersectoral action, description of the intersectoral action, main points developed, factors that benefit intersectoral actions, and factors that hinder intersectoral actions.

3. Results
A total of 81 publications were identified in the literature search. After reading the full text, 5 eligible studies were selected (Figure 1).
Figure 1. Flowchart for selecting articles, adapted from the PRISMA statement of 2020

Source: Prepared by the authors.
Table 2. Characterization of studies included in the scoping review (n = 5)

<table>
<thead>
<tr>
<th>Author/ Year</th>
<th>Country</th>
<th>Study Design</th>
<th>Social Actors</th>
<th>Drugs</th>
<th>Population</th>
<th>Sample (N total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nordmyr/2021</td>
<td>Finland</td>
<td>Qualitative study</td>
<td>School and government</td>
<td>Alcohol and other drugs**</td>
<td>Education and student welfare professionals in primary, secondary and vocational education</td>
<td>n = 74</td>
</tr>
<tr>
<td>Anderson-Carpenter/2016</td>
<td>USA</td>
<td>Quasi-experimental study</td>
<td>School, community organizations, businesses, government, youth-serving organizations, media, and law enforcement agencies</td>
<td>Alcohol</td>
<td>Elementary and high school students- 6th, 8th, 10th, and 12th grades</td>
<td>n = 59,761</td>
</tr>
<tr>
<td>Farrington/2015</td>
<td>Europe*</td>
<td>Report with case studies and cross-sectional study</td>
<td>School, community and government</td>
<td>Tobacco/Alcohol and other drugs**</td>
<td>99 cities</td>
<td>NI***</td>
</tr>
<tr>
<td>LaChauss/2008</td>
<td>USA</td>
<td>Quasi-experimental study</td>
<td>School and community</td>
<td>Alcohol</td>
<td>High school students 9th to 12th grades</td>
<td>n = 114</td>
</tr>
<tr>
<td>Schofield/2003</td>
<td>Australia</td>
<td>Retrospective Cohort</td>
<td>School, community, research center and university</td>
<td>Tobacco</td>
<td>Elementary and high school students- 7th, 8th, 9th, and 10th grades</td>
<td>n = 1,852</td>
</tr>
</tbody>
</table>

*Note. *Europe = includes all countries on the European continent; **Other drugs were not specified in the study; *** NI = not informed.

Source: Prepared by the authors.

The scoping review’s scientific evidence cited in this text spans over the last two decades. Almost half of the studies (Anderson-Carpenter, 2016; Lachauss, 2008) were conducted in the USA, with no studies conducted in Africa, Asia, and Oceania (Table 2). Regarding study design, 80% of the studies were quantitative (Anderson-Carpenter, 2016; Farrington, 2015; Lachauss, 2008; Schofield, 2003), with 40% being quasi-experimental (Anderson-Carpenter, 2016; Lachauss, 2008). Among social actors involved in intersectoral actions with schools, the community (80%) (Anderson-Carpenter, 2016; Farrington, 2015; Lachauss, 2008; Schofield, 2003) and the government (60%) (Nordmyr, 2021) stood out. Alcohol was the most common drug (Nordmyr, 2021; Anderson-Carpenter, 2016; Farrington, 2015; Lachauss, 2008), and high school students participated in 60% of eligible studies (Anderson-Carpenter, 2016; Lachauss, 2008; Schofield, 2003).
Table 3. Intersectoral actions, their descriptions and the main points developed in the scoping review that included five studies (n = 5)

<table>
<thead>
<tr>
<th>Author/Year</th>
<th>Intersectoral action</th>
<th>Description of the intersectoral action</th>
<th>Main points developed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nordmyr/2021</td>
<td>Shared responsibilities: multidisciplinary and intersectoral collaboration and communication</td>
<td>Described by four domains: 1. Health-promoting leadership in schools; 2. Legislation, structural guidelines and curriculum in the school environment; 3. Home-school collaboration; 4. Early signs and risk detection.</td>
<td>1. Expanded and shared responsibility at municipal and regional levels. School representatives discussed the collaboration of health promotion and substance use prevention activities occurring in the school environment, targeting students, parents and/or staff. 2. Legislation (non-smoking school area). Legally required municipal forums and multi-professional working groups focused on preventing drug use. Student Welfare Act with obligations relating to having a student welfare group at school responsible for drug prevention. 3. Responsibilities of parents to establish open and constructive communication with children, to contribute to children's development and self-esteem, supporting their involvement in constructive free-time activities, establishing mutual limits and standards. 4. School professionals have the primary responsibility to observe and react to various warning signs that indicate drug use, including school absence, notable changes in a student's study performance. Teachers carried out processes with family and/or student welfare services, with a mandatory meeting of groups of experts, requiring student consent.</td>
</tr>
<tr>
<td>Anderson-Carpenter /2016</td>
<td>Strategic Prevention Framework (SPF)</td>
<td>It is a five-phase model (assessment, capacity, planning, implementation, and evaluation) that supports coalition-led efforts to address underage drinking and its related consequences by promoting cultural competence and sustainability of prevention efforts.</td>
<td>New policies/practices with sectoral modification involving a coalition between social actors to monitor excessive alcohol consumption, implement increased penalties for parties at which young people can access alcoholic beverages and reduce the sale of alcoholic beverages in public spaces.</td>
</tr>
<tr>
<td>Farrington/2015</td>
<td>European Healthy Cities Network</td>
<td>Tobacco-Free Cities (TFC) – tobacco control and initiatives to develop smoke-free spaces in the city. - Prevention at school with broad strategic approaches regarding the misuse or harmful use of alcohol and other drugs, offering specific services or projects, involving families, children or adolescents.</td>
<td>In the TFC, MPOWER was developed into six components for tobacco control (M, monitor tobacco use and prevention policies; P, protect people from tobacco smoke; O, offer help to stop smoking; W, alert about the dangers of tobacco smoking; E, impose a ban on tobacco advertising, promotion and sponsorship; R, increase taxes on tobacco). Alcohol and other drugs family support program was developed, education programs for schools, young people and parents, peer education to develop skills.</td>
</tr>
<tr>
<td>LaChausse/2008</td>
<td>Fetal Alcohol Spectrum Teaching and Research Awareness Campaign (FASTRAC)</td>
<td>It is a peer-delivered, multimedia educational presentation designed to reduce the incidence of Fetal Alcohol Syndrome (FAS). Pairs of teen educators are trained with the multimedia program to use in the curriculum.</td>
<td>Knowledge of FAS; Attitudes towards alcohol use during pregnancy; Perception of the severity of alcohol use during pregnancy; Intention to use alcohol during pregnancy. The rationale is that the use of peer educators will influence other teens not to use alcohol during pregnancy.</td>
</tr>
<tr>
<td>Schofield/2003</td>
<td>Health Promoting Schools (HPS) Program</td>
<td>The intervention was based on community organization theory in which intervention schools were encouraged to adopt and own their HPS program and commit to implementing health promotion strategies to address health risk behaviors.</td>
<td>Establishment of health risk behaviors and obtaining commitment from the entire school to HPS program; Identification of key individuals and the ideal HPS program structure for each school; Planning, implementation and monitoring of HPS program strategies; Ongoing support and maintenance of HPS program structures and activities ensuring that a formal school curriculum adequately addresses the health risks associated with smoking, fact sheets and fortnightly school newsletters for parents, letters to tobacco retailers, development of smoke-free school policies, encouragement to non-smoking parents, peer influence programs, incentive programs including student-performed skits and poster contests to promote World No Tobacco Day.</td>
</tr>
</tbody>
</table>

Source: Prepared by the authors.
It’s interesting to note that the intersectoral actions at school that were highlighted in this scoping review were related to health promotion and health education. Some of the main points that were developed in association with more than one intersectoral action were: 1) having discussions for making decisions, directing responsibilities, open and constructive communications that must involve students’ parents and the students themselves in the school environment (Nordmyr, 2021; Anderson-Carpenter, 2016; Farrington, 2015; Schofield, 2003); 2) inspection and monitoring of alcohol and tobacco use to reduce public spaces with increased taxes (Nordmyr, 2021; Anderson-Carpenter, 2016; Farrington, 2015); and 3) peer education to influence adolescents to develop skills to prevent the use of alcohol and other drugs (Farrington, 2015; Lachaus, 2008; Schofield, 2003).

![Diagram of Benefits of Intersectoral Actions]

Figure 2. Infographic highlighting the benefits of intersectoral actions identified in a scoping review
Source: Prepared by the authors.

Intersectoral actions can bring several benefits, such as the school playing a leading role in forming a support network. This can be achieved by integrating and coordinating different social actors, especially by engaging families (Nordmyr, 2021; Anderson-Carpenter, 2016; Schofield, 2003). Additionally, local school bodies and judicial means can strengthen the policies and programs proposed by the World Health Organization (WHO) (Anderson-Carpenter, 2016; Farrington, 2015). Health education content can be produced and made available to help students understand the harmful effects of substance abuse such as alcohol and drugs (Lachaus, 2008; Schofield, 2003).
There are several challenges that hinder intersectoral actions in preventing alcohol and drug use in schools. These challenges include: 1) Inconsistent legal regulations that fail to provide clear guidance on how to prevent alcohol and drug use in schools (Nordmyr, 2021; Anderson-Carpenter, 2016; Farrington, 2015). 2) Discontinuity in health education within the curriculum, lack of knowledge of the risks associated with alcohol and drug use, and lack of participation and commitment from families in school initiatives (Nordmyr, 2021; Lachauess, 2008; Schofield, 2003). 3) Bureaucratic inefficiencies that impede the implementation of political changes in school practices (Anderson-Carpenter, 2016; Farrington, 2015).

4. Discussion

The purpose of the study was to shed light on the severe social and public health issue of drug experimentation, which affects different social classes. The focus was on school-going children and adolescents, who are particularly vulnerable to drug use. The research used a scoping review as a data collection tool, which revealed gaps in knowledge and inequalities in information, especially with regard to health education and drug prevention in the teaching-learning process of students. However, scientific documents on this topic are not published in international databases, and policies planned with intersectoral actions do not reflect the reality on the ground.

Intersectoral actions aimed at preventing the use of alcohol and other drugs in schools face multiple challenges due to bureaucratic hurdles that impede the execution of such actions. These challenges are often linked to social, political, and economic impasses. It is worth mentioning that the scoping review of intersectoral actions in schools primarily focuses on high and high-middle income countries. It was found that there are limited scientific publications on intersectoral actions aimed at preventing the use of alcohol and other drugs in schools, leading to low investment and scientific promotion, especially in low- and middle-income countries (World Bank, 2023).

LeNoue and Riggs (2016) found that implementing intersectoral drug use prevention programs in schools contributed to the development of school curricula, but this occurred slowly and gradually. On the other hand, Teesson and colleagues (2020) conducted a randomized multcenter study in secondary schools and found that actions that promote clarification and information about drugs at school were more effective in preventing drug use.

However, there is evidence that suggests inequalities in the prohibitionist policy, which is based on criminalization among users instead of educational prevention (Tatmatsu & Del Prette, 2020; Martins & Rocha,
Researchers have given more attention to alcohol and tobacco as compared to illicit drugs like cocaine and crack. This is because students usually prefer alcohol and tobacco as their first choice of drugs. Kandel and Yamaguchi (1993) suggest that people usually go through a progression of drugs before using illicit drugs. This scoping review also reveals that private sector involvement in preventing drug use in schools is quite limited. Pereira and Sanchez (2020) confirm that private companies invest more in private schools than public ones, leading to unequal access to information about good health practices. Private companies are important stakeholders in financing public policies in schools, but their lobbying efforts can influence public-private partnerships (Silva, 2017).

It is important to note that schools should play a key role in developing collaborative efforts to prevent alcohol and drug use. However, schools are often overlooked in promoting communication and strengthening support networks as outlined in public health and education policies (Padrão, 2021). Unfortunately, some government officials view young adolescents as less deserving of their rights, leading to exclusionary and prohibitionist measures. These measures are often justified as necessary to prevent social deviance resulting from drug use (Sposito, 2003; Tatmatsu, 2020). As a result, the approach to drug prevention in schools is often limited to repressive measures. This approach neglects the importance of prevention through education and support for overall health.

Brazil has a strict law called the Child and Adolescent Statute (ECA) that punishes the sale, supply, serving, administering, or delivering of drugs. However, despite this law, the National School Health Survey (PeNSE) conducted between 2009 and 2019 showed a 20% increase in the number of adolescents who smoked at least once in their life by the time they reached the 9th year of elementary school. The data on the use of alcoholic beverages was even more concerning, with the percentage increasing from 52.8% in 2012 to 63.2% in 2019, according to IBGE. Despite the existence of prohibitionist legislation, access is still facilitated by friends or as a result of third parties, including within the family. In fact, according to Bahr (2005) apud Paiva and Ronzani (2009), “The lack of parental support, the use of drugs by the parents themselves, permissive attitudes of parents towards consumption and the inability of parents to dialogue with their children are predisposing factors to the initiation or continuation of drug use”. These factors have resulted in the lack of a coherent and organized educational policy in schools that involves students and their families.

It seems that each school has its own unique characteristics and methods when it comes to the prevention of drug use. However, many schools are not adequately prepared to deal with prevention efforts, as evidenced by the lack of a protocol outlining preventive actions to be taken (Tatmatsu, 2020). Despite these challenges, changing the design of schools in the United States could prove beneficial. It is estimated that for every dollar spent on intersectoral drug prevention actions and programs in schools, around 18 dollars can be saved on the social costs associated with drug abuse (Department of Health and Human Services, 2008).

### 4.1 Limitations

During this scoping review, several limitations were identified. These limitations include: 1) a small number of primary and secondary studies on drug prevention in schools that involve intersectoral actions; 2) insufficient and non-detailed evidence regarding the social actors responsible for implementing intersectoral actions; 3) the negative impact of strictly prohibitionist logic on drug prevention outcomes at school; and 4) the lack of subgroup analyses in different ethnic populations globally.

### 4.2 Practical Implications

The identification of intersectoral actions in schools allows the development of educational strategies focused on drug prevention, taking into account the social vulnerabilities of each locality. In addition, it is important to reconsider the various bureaucratic obstacles among the different social actors in order to speed up the process of implementing intersectoral actions.

It is also pointed out that the evaluation of the effectiveness and cost-effectiveness of cross-sectoral interventions applied in school in different countries may come into conflict with the violence of drug trafficking, arms trafficking and police corruption, which is a relevant need to monitor the durability or temporality of the interventions. In relation to the objectives achieved, it is recommended that new intervention research and observational studies be conducted to further evaluate the results of intersectoral interventions in schools to prevent alcohol and other drugs.

### 5. Conclusion

This review found that there is a great need to share and implement cross-sectoral policies globally to contribute
to promotion and prevention measures related to the use of alcohol and other drugs in schools. Despite the small number of articles in this review, the cross-sectoral actions identified demonstrate the importance of involvement and accountability of school, health, family, justice, teaching, research, community and government stakeholders in promoting healthy schools and addressing problems, such as alcohol and other drug use. Additional and possibly longer studies are needed to examine the impact of cross-sectoral interventions in school.

Furthermore, it is interesting to note that the components of cross-sectoral actions in school can be improved through the identification and involvement of other stakeholders, in the community itself and in government. This report is innovative, in that it identifies the benefits and difficulties associated with cross-sectoral actions, allowing for future adaptions for the development and continued application of these cross-sectoral interventions. However, it is still a major challenge to shift the focus from interdiction policies to the implementation of intersectoral educational interventions in a more integrated manner with families and the community, and to increase the promotion of health education.

Approval Register
This study is a systematic review was registered on the international Open Science Framework (OSF) platform with DOI: 10.17605/OSF.IO/KNJ4Y with access through the provided link: https://osf.io/knj4y/

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Authors’ contributions
Conception and design of the study: MsC. JGM, PhD. LSK, BsC. ARP and PhD. AMA. Acquisition of data: MsC. JGM and PhD. AMA. Analysis and interpretation of data: MsC. JGM, Profa. MGL, Prof. LFC, BsC. ARP and PhD. AMA. Manuscript drafting and revision: MsC. JGM, BsC. ARP, Profa. LSK, Prof. LFC, Profa. MGL and PhD. AMA. All authors approved submission of the final article.

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