

Key Attributes of School-Based Interventions for Preventing Drug Abuse Among Lower Elementary Schoolchildren in Malaysia: A Qualitative Research

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ABSTRACT

Schools can address drug-related issues by implementing interventions through various means, including curriculum enhancements, educational programs, policies, and best practices. This research explores community perspectives and experiences to better understand the key attributes of school-based drug abuse prevention interventions targeting lower elementary government schoolchildren in Malaysia. The researchers purposively recruited and interviewed 16 participants for this qualitative research, employing grounded theory analysis for data evaluation. The findings highlighted several key characteristics, such as the importance of early intervention, consideration of individual, social, and environmental differences, the implementation of age-appropriate interventions, a focus on personal and social development, the use of diverse instructional techniques, reliance on teachers and school counsellors for knowledge dissemination, and increased support for children facing truancy and conduct issues. Additionally, the research emphasized the significance of intervening with parents through schools and involving external stakeholders in the planning and implementation process. The researchers recommend the prominent implementation of both universal and selective interventions for lower elementary schoolchildren. The findings also emphasized the important role

of engaging parents in interventions conducted through schools. Furthermore, the research identified how various stakeholders could contribute to school-based interventions. School-based interventions have the potential to benefit not only children but also teachers, counsellors, parents, families, community members, and other stakeholders.

Keywords: Drug abuse prevention, lower elementary schoolchildren, Malaysia, preventive strategies, qualitative research, school-based interventions

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INTRODUCTION

The drug abuse epidemic in Malaysia continues to pose a significant challenge, growing more complex with the emergence and spread of new harmful drugs. The primary strategies to address drug abuse in the country include preventive education, enforcement and security programs, treatment and rehabilitation services, and the development of international relations (National Anti-Drugs Agency [NADA], 2024). Prevention encompasses interventions aimed at significantly lowering the risk of drug acquisition, promoting drug avoidance, and preventing the escalation of interpersonal and health-related issues (United Nations Office on Drugs and Crime [UNODC], 2003). Table 1 below outlines the four levels of prevention, namely universal, selective, tiered, and indicated, specifically designed for children (National Institute on Drug Abuse, 2020).

The school environment is a vital starting point for initiatives aimed at enhancing individuals’ knowledge, as well as their personal and social skills, ultimately seeking to reduce their individual risk factors for drug use (UNODC, 2004).

The primary objective of prevention efforts is to raise awareness about the risks of drug use, enhance life skills, and promote healthy lifestyles and positive attitudes among schoolchildren (Institute for Public Health, 2023a). Addressing externalized problems or disorders during childhood is crucial for preventing not only drug use but also disruptive, antisocial, and delinquent behaviours, along with issues related to academic performance and school dropout rates (UNODC, 2004).

Currently, government elementary schools in Malaysia are implementing a range of prevention strategies as part of the drug abuse prevention program known as *Program Pendidikan Pencegahan Dadah* (PPDa) (Daily School Management Section, 2022). Despite ongoing efforts, drug abuse remains a significant issue for children and adolescents. The Malaysian National Health and Morbidity Survey reports that 60,000 Malaysian adolescents aged 13 to 17 are currently using drugs, and 106,000 have tried drugs at least once. Among those who have ever used drugs, 75% initiated use before age 14 (Institute for Public Health, 2023b). Recent reports also highlight drug

Table 1
Different levels of prevention

Level of Prevention	Description
Universal	Targets all children in schools or communities, regardless of individual risk factors
Selective	Focuses on children at heightened risk due to factors like behavioural issues or living in high-poverty or high-crime areas
Tiered	Targets multiple risk levels, combining universal interventions with screening for severe issues and offering additional services as needed
Indicated	Focuses on children who have already started using drugs

Source: National Institute on Drug Abuse (2020)

use among elementary schoolchildren (Chelvi, 2024; Kaur, 2019).

This suggests that current prevention strategies may not effectively strengthen protective factors, especially for lower elementary school children. The UNODC and the World Health Organization (WHO; 2018) identify key protective factors for this age group, including school attendance, attachment to school, age-appropriate language and numeracy skills, social skills, and prosocial attitudes. The early and middle childhood stages are crucial for developing vulnerability and resilience, making them ideal for prevention interventions (Furu et al., 2023). Malaysian educators also emphasize the need for earlier drug use prevention programs to help students recognize and address drug abuse issues (Jusoh et al., 2023).

While most drug abuse prevention research focuses on upper elementary and secondary school children, there is a notable gap in studies targeting younger children, particularly those aged 7 to 9 in Malaysian government schools. This age group is often overlooked, despite the importance of early intervention in shaping attitudes and behaviours toward drug use. Additionally, existing literature tends to downplay the role of key external stakeholders, such as parents and the community, in school-based interventions. This research aims to address these gaps by focusing on lower elementary schoolchildren and exploring ways to enhance school-based prevention efforts.

Furthermore, international policies, especially in the United States and Europe, often focus on adolescents and their social

environments. However, few address the needs of younger children. In Malaysia, a diverse society with strong cultural values, it is essential to integrate these factors for effective intervention. This research focuses on lower elementary schoolchildren in Malaysia and incorporates cultural perspectives into the intervention framework, aiming to develop more culturally sensitive drug abuse prevention strategies by considering the roles of family, community, and government.

The main objective of this qualitative research is to gather insights and firsthand experiences from the Malaysian lower elementary school community on drug abuse prevention initiatives. The goal is for the findings to inform revisions of existing and future universal, selective, tiered, and indicated interventions, such as programs, policies, and practices in lower elementary government schools. The research aims to answer the question: “What are the key attributes of school-based interventions for drug abuse prevention targeting lower elementary schoolchildren in Malaysian government schools?”

LITERATURE REVIEW

Theories in Prevention

Social influences, such as family, friends, and peers, are key factors in drug abuse. Broader elements, like social networks, community, culture, and media, also play a significant role (Neighbors et al., 2016). According to the European Union Drugs Agency (EUDA; 2010), the social influence model offers an alternative to approaches such as information

dissemination and affective education, preceding ‘competence enhancement.’ The two components of the model are social learning theory and life skills theory.

Social learning theory suggests that behaviours, such as drug abuse, are learned through observation and the interaction of personal, environmental, and behavioural factors (Bandura, 1977; Smith, 2021). Children, however, tend to learn about drug use and form expectations about its effects through direct observation and vicarious learning (Scheier, 2012). Life skills theory, on the other hand, focuses on how individual, environmental, and social factors interact to shape behaviour, emphasizing skills such as critical thinking, communication, and stress management to protect children from negative influences (EUDA, 2010). Botvin and Griffin (2015) state that programs incorporating life skills training are effective primary prevention strategies for drug abuse, as these programs focus on enhancing social and personal competence skills.

The Substance Abuse and Mental Health Services Administration (SAMHSA; 2020) developed the Focus on Prevention Guidelines for Drug and Substance Use, which delineate four prevention theories. Table 2 below presents these theories along with their descriptions.

School-Based Interventions

The European Prevention Curriculum emphasizes that effective interventions encompass universal strategies, such as creating supportive social policies and fostering a positive school culture. These interventions also include universal and selective approaches that teach personal and social skills while addressing social influences, alongside indicated methods to tackle individual psychological vulnerabilities (EUDA, 2019). Interventions can strengthen family relationships by enhancing parent-school communication, developing partnerships, and equipping parents with effective techniques for teaching and managing child

Table 2
Prevention Theories according to the Focus on Prevention Guidelines for Drug and Substance Use

Theory	Description
Behaviour Change Model	Behaviour change occurs when mass media messages raise awareness, alter knowledge, beliefs, and attitudes, teach skills, and build confidence to act in specific situations
Diffusion of Innovation Framework	Opinion leaders, or "trendsetters," spread behaviours, such as drug use, by discussing and promoting these innovations
Health Belief Model	Individuals are more likely to change behaviour if they perceive value or fear consequences, such as the effects of drug use, and anticipate positive or negative outcomes
Community Organisation Theory	Active participation and community development are key to addressing health and social issues effectively

Source: SAMHSA (2020)

behaviour (Ranaweera & Samarasinghe, 2006).

The UNODC (2004) recommends a series of sessions focused on teaching and practicing various personal and social skills to improve mental and emotional health, thereby enabling children to effectively manage challenging situations. In the context of Asian schools, behaviour modification skills are crucial and should incorporate patient listening, solution-oriented reasoning, guidance, counselling, fostering a nurturing teaching environment, and modelling exemplary behaviour (Ratnayake, n.d.).

Policies in Prevention

According to the UNODC and WHO (2018), a successful system uses evidence-based policies and interventions to support children's development, especially during high-risk transitions like childhood and adolescence. It is also important to address both individual and environmental factors of vulnerability and resilience. International guidelines prioritize personal and social skills education, improving classroom environments, parenting programs, policies to keep children in school, mental health interventions, adult programs in schools, workplace prevention, community initiatives, and addressing media influence. Additionally, the SAMHSA (2019) emphasizes the importance of cultural competence and sustainability in drug prevention.

In Malaysia, i-Cegah policies suggest using various media channels, such as new media, broadcast media, face-to-face interactions, outdoor media, and print media,

to disseminate drug prevention information. Education through teaching and learning is vital for imparting prevention knowledge and skills. Community empowerment helps members plan, implement, and evaluate prevention initiatives. Creating a drug-free environment involves establishing supportive values, codes, and attitudes. Identifying issues and referring individuals to experts is crucial, as is mobilizing community groups, including volunteers, influencers, and local role models, to provide alternatives (NADA, 2022).

Prevention in Government Elementary Schools in Malaysia

Jusoh et al. (2023) examined drug prevention programs in elementary schools in high-risk areas of Perak, highlighting challenges faced by teachers. The programs included activities such as drawing competitions, quizzes, talks, *Program Sifar Dadah Sekolah Rendah* (PROSIDAR), and *Program Intelek Asuhan Rohani 2.0* (PINTAR 2.0). The findings from this research indicated that teachers collaborated with parents to implement these programs, but emphasized the need for earlier intervention and a standard operating procedure for addressing drug abuse. They also identified issues such as inadequate guidance, inconsistent approaches, insufficient training, and ineffective programs that failed to address the root causes of drug use. Additionally, the programs were poorly evaluated, budgets were inadequate, and teachers expressed concerns about the lack of monitoring.

PINTAR 2.0 targets children, parents, and family members in a selective and tiered intervention aimed at identifying at-risk students, raising drug abuse awareness, enhancing life skills, promoting healthy lifestyles, and encouraging family involvement (NADA, 2023). Each year, it selects a limited number of children aged 10 to 12 (NADA, 2016). Che Rozubi et al. (2023) found that the program improved awareness, knowledge, skills, spirituality, delayed drug distribution, and reduced misconduct. However, challenges included the need for a more child-centered approach, monitoring issues, and some participants not meeting the criteria. Opportunities for improvement involved addressing the root causes of high-risk behaviours and enhancing collaboration among key agencies. Threats included insufficient parental involvement and external environmental influences.

METHODS

Research Design

This research employed a basic qualitative design to explore participants' experiences with school-based drug abuse prevention and to gather their insights and recommendations for effective interventions targeting lower elementary schoolchildren. A qualitative approach was chosen to understand the context surrounding participants' experiences, which is essential in educational settings where context influences perceptions and behaviours (Maxwell, 2013). Qualitative data also provide in-depth insights necessary

for creating tailored interventions (Green & Thorogood, 2018). Ethical approval for the research was granted by the Universiti Malaya Research Ethics Committee (Reference No.: UM.TNC2/UMREC-2041)

Sample and Recruitment

A total of 16 participants were selected to capture diverse viewpoints and experiences, particularly in school-based intervention research, where various stakeholders provide unique insights. Scholars suggest that this sample size is typically sufficient for saturation in focused qualitative research (Guest et al., 2006; Patton, 2002). It is also appropriate for capturing a broad range of perspectives without overwhelming the data collection process (Creswell & Poth, 2018). To address potential biases, purposive sampling was used to recruit participants for this research, focusing on "subject matter experts" essential for the development of children in lower elementary schools (Naisola-Ruiter, 2022). This selection was informed by existing literature and school-based drug prevention practices and policies in Malaysia. Recruitment methods included LinkedIn, Google Search, and referrals. In accordance with Merriam (2009), the researchers sought multiple perspectives by recruiting two individuals from each category, ensuring participants were not from the same organization. However, this guideline was adjusted for participants from the NADA, as the agency's headquarters included senior officers.

Participants were selected based on established criteria before the research

began. The researchers informed eligible participants about the voluntary nature of their involvement and the purpose of the research. All participants provided informed consent and shared demographic information, including age, location, and work experience. Data collection occurred via email for remote interviews or in person for face-to-face interviews. Table 3 presents an overview of participant characteristics.

Table 3
Participant characteristics

Code	Participant	Characteristics
P1	Drug abuse expert	Lecturer and scholar in the Department of Social and Preventive Medicine, Faculty of Medicine, Universiti Malaya. Active member of the Centre of Excellence for Research in AIDS (CERiA)
P2	Drug abuse expert	Faculty member at Universiti Sains Malaysia, affiliated with the Centre for Drug Research. Authored numerous research publications on drugs and drug-related issues in Malaysia
P3	Peer worker	Former drug user and has worked as a peer worker with Persatuan Insaf Murni Malaysia for 10 years
P4	Peer worker	7 years of volunteer experience at Drug-Free Malaysia, with experience in the design and coordination of school-based interventions using creative arts
P5	Parent of an elementary school child	43-year-old, with children aged 12, 8, and 3 years old. Two of them are currently registered in a government elementary school in Shah Alam
P6	Parent of an elementary school child	45-year-old, with children aged 17, 10, and 8. Two of them are currently registered in a government elementary school in Kuantan
P7	Elementary school counsellor	Employed at a government elementary school in Petaling Jaya, Selangor, for the past 5 years
P8	Elementary school counsellor	Employed at a government elementary school in Kota Kinabalu, Sabah, for the past 6 years
P9	Elementary school principal	Head of student affairs for 10 years, the participant has been the principal of a Tamil national elementary school in Brickfields, Kuala Lumpur, for the past 3 years
P10	Elementary school principal	Principal of a Chinese national elementary school in Ipoh, Perak, for the past 5 years
P11	Elementary school teacher	Elementary school teacher at a government school in Subang Jaya, Selangor, with 5 years of experience teaching English to lower elementary students
P12	Elementary school teacher	Elementary school teacher at a government school in Damansara, Selangor, with 20 years of experience teaching lower and upper elementary levels. Also serves as a PPDa teacher
P13	Community leader	Community leader at <i>Program Perumahan Rakyat</i> Desa Tun Razak, Kuala Lumpur, for 3 years, while living in the community for the past 10 years
P14	Community leader	Community leader at <i>Program Perumahan Rakyat</i> Wangsa Maju, Kuala Lumpur, a former drug user, and actively involved in community-based drug prevention efforts for the past 7 years

Table 3 (continue)

Code	Participant	Characteristics
P15	Officer at the NADA	Officer with 10 years of departmental experience across Sabah, Johor, Terengganu, and Perak. Currently stationed at the Selangor main office, with 3 years in the preventive division organizing school-based interventions
P16	Officer at the NADA	An officer with 6 years of experience and a law enforcement background, currently working in the preventive division

Data Collection

The same researcher conducted all interviews, either face-to-face or via Google Meet. This was to ensure consistency and reduce variability, which enhances dependability in qualitative research (Creswell & Poth, 2018). Participants were provided with a participation information sheet and asked to sign a consent form. An initial interview protocol was developed based on an analysis of relevant literature, practices, and policies on school-based drug abuse prevention. This protocol was then validated by three experts in the field, whose qualifications are outlined in Table 4.

The researchers made minor modifications and enhancements to the interview protocol based on expert feedback. The revised protocol was then

used to guide two preliminary interview sessions. Participants were instructed to respond in both English and Bahasa Melayu. After incorporating participant feedback and the researcher’s notes, the protocol was further revised. The final version of the protocol was used to guide all 16 interview sessions. The researcher minimized biases by creating a neutral environment and using active listening and open-ended questions to ensure participants’ perspectives guided the conversation (Patton, 2015). To uphold validity, the researcher remained sensitive, non-judgmental, and respectful (Merriam, 2009). All interviews were audio-recorded and transcribed verbatim. To ensure accuracy, the translated responses were reviewed and approved by a senior lecturer from the Department of Education and Counselling at Universiti Malaya.

Table 4
Expert qualifications for validating the interview protocol

Expert	Qualifications
One	Education and counselling professor at Universiti Sains Islam Malaysia, the expert has published articles in indexed journals on topics such as drug addiction, treatment, and rehabilitation
Two	An education professor at Universiti Malaya, the expert has research experience in educational technology, teacher education, and teaching methods
Three	Associate professor at Universiti Kebangsaan Malaysia, the expert specializes in psychological counselling, adolescent counselling, and counselling in industrial and organizational settings

Data Analysis

The researchers analyzed the data from 16 interviews using Strauss and Corbin's (1998) grounded theory approach. The transcribed interviews were transferred to a Microsoft Word document, and open coding was applied to each line (Esterberg, 2002). Axial coding was then used to organize the codes into categories and subcategories through a constant comparative method. The researchers allowed categories to emerge naturally, remaining open to recurring patterns (Patton, 2002). Selective coding was applied to develop final themes (Costa et al., 2016). Relevant categories were classified according to identified themes, focusing on key characteristics of school-based drug prevention interventions for lower elementary schoolchildren in Malaysian government schools. Saturation was achieved when a variety of perspectives and rich, detailed data were collected, while maintaining focus on the research question (Charmaz, 2014; Creswell & Poth, 2018). The findings were reported directly in relation to the research question.

RESULTS

All interview quotes in this section are from personal communications with participants.

Intervene During the Early Years of School

Participants stated that drug abuse prevention interventions could start at the lower elementary school level.

"Children between the ages of 7 and 9 are better able to understand things than younger ones. I don't think there's any harm in starting intervention at that age." (P1)

"I have seen children aged 10 to 12 using drugs. If this is the case, prevention should begin in lower elementary school, as the onset of drug use is occurring at younger ages." (P2)

"At times, their living environment is not conducive, so intervention should begin when they enter school. By Standard 1, these children are already aware of their surroundings and circumstances." (P3)

Consider the Child's Individual, Social, and Environmental Differences

The design and development of these interventions should consider factors such as the target population, culture, socioeconomic status, school location (rural or urban), the child's personality, and individual experiences.

"The initiatives should be tailored rather than adopting a one-size-fits-all approach. People in rural areas live differently from those in cities. We should also consider factors such as family income and the culture of specific places. It is important to focus on each target population while considering the contextual factors within the social structure." (P1)

“We also need to consider the child’s personality, as it may relate to potential drug use. Each student comes from a different background and experiences varying levels of stress.” (P5)

“We must consider the child’s personality and their truant behaviour. They should be continuously observed and monitored, along with the company they keep, including family and friends. Understanding their character and intervening accordingly is what it means to be selective.” (P15)

Implement Interventions that Match the Cognitive and Emotional Development of Lower Elementary Children

There is importance in customizing interventions based on a child’s cognitive and emotional development. Children in the lower elementary age group often imitate behaviours.

“According to Bandura’s theory, children of this age imitate what their parents do. However, parents may think that their children are too young to understand. But they are observing, aren’t they?” (P1)

Diversifying methods of conveying information is essential, as children may find it challenging to understand concepts related to drug use and addiction.

“In my school, I realize that students aged 7 to 9 would not be

able to grasp the concept of abuse and addiction. They just know they should not take drugs. They start to question ‘why.’ It makes sense to explain the effects of it rather than what leads to it.” (P8)

Children at this age are more aware of their own emotions and those of others.

“When I speak to my child, I notice she can express her feelings well. She can even tell when I am upset or angry.” (P5)

Focus on Personal and Social Development

Primary drug prevention education should focus on personal and social development to strengthen the child’s interests, mindset, and values.

“We need to create a new path for the child. If they relate to music or have hobbies like painting or skating, it creates an alternative path compared to drug use. I think any intervention needs to convey positive values and mindset for the children, know what is right and wrong.” (P4)

Participants identified that, at the lower elementary level, children can be taught about peer selection, drug refusal skills, emotional regulation, decision-making, and basic communication skills.

“Not only do we have to teach them the skills of refusing drug

use, but also the skills to resist peer pressure.” (P1)

“The teachers themselves must teach these children how to communicate with friends and parents.” (P2)

“Remind these children how to socialize, pick friends, and avoid those who are not good influences.” (P3)

“We can create creative platforms such as music and sports so that these children can de-stress and remove themselves from negative groups.” (P4)

“Besides coping skills, we can teach them how to express feelings, make decisions, communicate with their friends, and treat peers and parents.” (P16)

Provide Education Through a Diverse Range of Instructional Techniques

Elementary schoolchildren may learn more effectively through various instructional strategies, including role play (Participants 4, 9, and 11), creative projects (Participants 2, 4, 8, 10, and 15), game-based learning (Participants 3, 4, 9, 12, 14, and 16), demonstrations (Participants 1 and 15), poster presentations (Participants 5, 7, 11, and 14), videos (Participants 3, 5, 6, 8, 9, and 11), musical activities (Participants 4 and 11), drama (Participants 3, 4, 5, 8, 11, and 13), and storytelling (Participants 3, 7, 9, and 14). Participants also suggested

increasing digital engagement, noting that children learn best from electronic sources.

“Through media or electronic resources for providing information, biases can be reduced.” (P2)

“Children aged 7 to 9 learn best through observation. Programs must be paired with content that has a lot of pictures or videos. They do not fully understand information through talking alone.” (P6)

Teachers and School Counsellors as Primary Sources of Knowledge Dissemination

Younger children learn best from teachers, who not only provide drug prevention education but also observe and report any noticeable behavioural changes.

“At home, parents notice behavioural changes, but at school, it is the teachers who notice them.” (P6)

“For this age group, teachers are the best for influencing students.” (P16)

Religious teachers can lead programs.

“Other than the teachers, the religious teacher assists and leads the programs in my school.” (P8)

Subjects like health education (Participant 7), language (Participants 8 and 15), morals (Participants 11 and 12), science (Participant 11), and religious

studies (Participant 12) can incorporate drug prevention education. Participants also suggested integrating it into extracurricular activities, including clubs, sports, and religious events.

“We can have more extracurricular activities, sports events, educational events, and religious events to bring everyone together at school.” (P3)

Counsellors can assist in designing and implementing drug prevention programs (Participants 5, 7, 8, 10, 15, and 16). They can deliver presentations during school assemblies (Participant 7), provide classroom instruction (Participant 15), or offer drug prevention education through counselling sessions (Participants 1, 5, 8, and 9). Counselling can also serve as a strategy for drug prevention.

“Counselling can be an effective intervention. The counsellor can identify children facing problems or external influences by observing their behaviour during sessions.” (P9)

Provide Extra Attention to Children with Truant Behaviour and Conduct Issues

Participants emphasized that interventions should focus on children exhibiting truancy and conduct issues.

“A child may exhibit aggression or attitude problems even without using drugs. Skipping school can lead to

gang involvement and, eventually, drug use, as these behaviours often share common root causes. This is why it’s important to focus on those at risk” (P3)

“Children exhibiting truant behaviour may face problems, such as skipping school, using drugs, and developing additional disciplinary issues.” (P15)

Intervene with Parents of Children in Schools

A key finding regarding parental intervention in school-based settings is the importance of providing drug and social education, along with information on personal development and sexual education.

“Most parents are unaware of external influences. Once they understand the causes of drug use and abuse, they can motivate their child, discuss the consequences, and raise awareness.” (P1)

“Education for them can focus more on personal development, understanding societal issues, handling social problems, and even sexual education.” (P15)

Drug abuse prevention is more effective when parents are guided on engaging in open conversations, maintaining close relationships, and actively monitoring their child’s academic, social progress, peer interactions, and behavioural changes at home.

“Parents should be guided on how to speak openly with their child to encourage sharing struggles. They can also help by monitoring peers, media, and social media exposure, observing behavioural changes, and staying aware of their child’s academic progress.” (P4)

Parents can benefit from resources on financial management and referrals for mental health support or treatment for drug abuse and addiction.

“Parents can be given guidance on finances such as Credit Counselling and Debt Management Agency (AKPK) services.” (P13)

“Counsellors at schools can also provide information on how parents can get support for their own problems and treatment for drug use and addiction.” (P15)

Participants emphasized the importance of providing parents opportunities to facilitate interventions in schools, promote drug-related information, and raise awareness within their families and the broader community.

“Parents can also spread knowledge outside of school, at home, or in their residential gardens or societies.” (P4)

“Schools can invite parents to participate in programs, or even run them, perhaps.” (P5)

Engage External Stakeholders in Interventions

Schools should engage external stakeholders, such as local artists, social media influencers, external counselors, and politicians, to effectively plan and implement interventions.

“It is important to involve local artists and social media influencers in delivering the message.” (P3)

“External child counsellors or drug counsellors from rehab can contribute as well.” (P5)

“For parents, engaging local politicians is most effective, as they are seen as influential.” (P16)

Participants highlighted the key role of community leaders in school-based prevention efforts.

“Teachers have so much on their plate. External parties, like community leaders, can come in to share information, as they are known by parents.” (P1)

“The leaders tend to have high influence, especially in B40 or PPR housing areas. They can spread prevention knowledge through community events.” (P12)

“As a PPR leader, I would have to work together with non-governmental organizations to run programs.” (P13)

Participants noted that non-profit organizations play a crucial role.

“Peer workers, often ex-drug users, are familiar with the system and can guide parents and families in accessing support.” (P3)

“We know of community resources and can serve as a first point of contact for schools, especially when government agencies are unavailable. We also help organize talks, programs, and activities like dance or music.” (P4)

Drug abuse experts and medical professionals can contribute to school-based prevention by helping design content, delivery strategies, and training materials for educators and organizations.

“Experts and professionals can design and develop content, as well as train educators on how to teach it.” (P2)

“Experts are the most credible individuals to deliver talks to adults.” (P3)

Most of the external stakeholders’ involvement should focus on design and delivery as well as adult interventions, given concerns about children’s safety in schools.

“Since these are very young children, it may be unsafe to allow adults outside of school to have direct contact with them, as this is a matter of safety.”. (P2)

Other government agencies that can contribute to school-based prevention include the Ministry of Women, Family and Community Development (Participant 1), the Ministry of Youth and Sports (Participant 1), the Ministry of Health (Participant 3), the Ministry of National Unity (Participant 6), the Royal Malaysia Police (Participant 3), and the State Islamic Religious Council (Participant 3).

DISCUSSION

A key theme of this research highlights the importance of early preventive interventions, particularly for students in Standards 1 to 3, aged 7 to 9. However, current programs, such as PINTAR 2.0, are aimed at upper elementary students (NADA, 2023). Malaysian researchers also argue that drug prevention is most effective for children aged 11 to 12, which coincides with the formal operations stage (Chie et al., 2015). Nevertheless, Erikson’s developmental theory suggests that younger children are navigating the balance between industry and inferiority, facing both social and academic challenges (Cherry, 2024). Thus, early interventions can expose children to positive behaviours and life skills, reducing their vulnerability to harmful behaviours, such as drug use (UNODC & WHO, 2018).

The findings emphasize the need to consider individual, social, and environmental factors in prevention efforts (Bierman et al., 2011). Intervention design should account for factors such as target population, culture, socioeconomic status, school location, personality, and experiences.

This highlights the role of the social environment and individual experiences in shaping behaviour through observing and imitating role models. Interventions that align with a child's cultural context can also enhance resilience and coping abilities. Thus, tailoring interventions to a child's context, while addressing both resilience and vulnerability, is essential (UNODC & WHO, 2018). In Malaysia, cultural competence is also crucial, as language diversity impacts the accessibility and effectiveness of drug prevention programs (SAMHSA, 2019; Tan et al., 2018).

Prevention science integrates human development into intervention design (Biglan et al., 2011). During middle childhood, children undergo emotional and social changes, prioritizing friendships and peer approval while developing mental skills to express thoughts and feelings (Centers for Disease Control and Prevention, 2024). Emotional awareness, including understanding guilt, pride, and shame, also develops (Denham & Burton, 2003). This stage is crucial for teaching personal and social skills, making it an ideal time for interventions on drug refusal, emotional regulation, decision-making, and communication to help children navigate peer relationships and school environments (UNODC & WHO, 2018). Nevertheless, it is important to customize interventions based on a child's cognitive and emotional development, as younger children often imitate behaviours. Interventions can leverage this stage by modelling positive behaviours from influential figures, such as educators, parents, and peers. Additionally,

various skills can be taught in accordance with their comprehension levels.

School-based interventions targeting social competence could potentially reduce drug use (Bulut & Usman, 2020). The findings on personal and social development, including peer selection, drug refusal skills, emotional regulation, decision-making, and basic communication skills, align with the recommendations of the *European Prevention Curriculum*. However, the findings overlook important skills, such as problem-solving, assertiveness, and self-efficacy (EUDA, 2019). Essentially, interventions should focus on life skills to help children navigate social challenges and foster personal efficacy. Additionally, it is important to consider the role of a child's social environment in shaping behaviour through the observation and reinforcement of positive behaviours.

The findings highlight the need for diverse instructional methods to engage younger children. According to the EUDA (2019), interactive methods, structured lessons, and group activities are the most effective approaches for school-based interventions. The UNODC (2004) emphasizes role-play as an effective method for practicing drug refusal skills, while films and videos can model these skills, aiding in behavioural rehearsal (Scheier, 2012). Children can learn and rehearse positive behaviours through observation and role-playing in a supportive setting. Moreover, creative methods like role-play, music, and videos focus on developing essential personal skills, while creative platforms such as music and sports help

children de-stress and avoid negative peer influences (Volkow, 2019). The Institute for Public Health (2023a) suggests integrating technology, such as digital-based programs, to enhance engagement and foster self-resilience. Similarly, Paz Castro (2022) found that an automated mobile life-skills program effectively prevents drug use, offering a convenient alternative to school-based programs.

Teachers and counsellors play a crucial role in delivering knowledge and implementing sustainable prevention programs. As primary sources of information, teachers support students both inside and outside of the classroom (Gabrhelík, 2020). In addition to promoting prosocial behaviour, they help prevent misconduct and encourage student participation (Low et al., 2013; UNODC & WHO, 2018). The findings also stress the importance of involving counsellors in prevention efforts, with counsellors able to intervene universally, selectively for at-risk groups, or specifically target students showing signs of distress or early drug use (Ratnayake, n.d.). This highlights the significant role of teachers and counsellors as positive role models and sources of reinforcement in the learning process. Through active involvement, they can also help develop essential skills. Cultural and religious factors, such as religious studies or programs led by religious teachers in Malaysia, may also significantly impact drug prevention while promoting respect for diverse beliefs (Mohd Nawawi et al., 2024).

Findings from Jusoh et al. (2023) highlight challenges teachers face in

implementing interventions, such as a lack of guidance, inadequate training, ineffective evaluations, and questionable reports. These issues underscore the need for effective teacher and counsellor training. According to Handrianto et al. (2021), key competencies include developing teaching plans, understanding the curriculum, using effective strategies, fostering a positive environment, and adopting a social approach. Specialized training in identifying and managing conduct disorders and drug abuse is essential for those working with high-risk children (Institute for Public Health, 2023a; Rahimi et al., 2019). Proper training enhances teachers' and counsellors' ability to model positive behaviours and reinforce pro-social actions in students. Additionally, with proper training, they can be better equipped to foster a supportive environment where children can develop critical skills.

This research suggests that interventions should target children exhibiting truancy and conduct issues, as these behaviours often precede drug use later in life (Baharudin et al., 2005; Mansor et al., 2017; Mohd Jais, 2012; Tai & Abu Bakar Ah, 2016). Early interventions for children with emotional and behavioural disorders are crucial, as these children are at greater risk of drug use later in life (UNODC & WHO, 2018). These findings suggest that negative behaviours may be influenced by harmful role models or peers. Therefore, equipping these children with life skills early on can reduce their future risk of drug use. In addition, several Malaysian studies highlight the need to monitor gifted students and children with

special needs, who may be at risk (Abu Bakar & Ishak, 2014; Amat, 2018; Mansor et al., 2017).

The findings emphasize the importance of school-level interventions, with parents serving as a key protective factor against drug use (O'Connell et al., 2009). This is particularly crucial because elementary-aged children from dysfunctional families may associate with peers who engage in risky behaviours, thereby increasing their vulnerability (UNODC & WHO, 2018). The findings underscore the role of parents and caregivers as behaviour role models. Workshops can help parents set rules, monitor activities, develop social skills, and model positive behaviours, promoting healthy development, managing behavioural disorders, preventing violence, and reducing maltreatment (WHO, 2017). Workshops that help parents manage behavioural disorders and promote positive social interactions directly support the development of key life skills in children.

Stringer (2022) links children's brain development to neighbourhood adversity, suggesting that drug prevention should begin early and involve the entire community. The research identifies key external stakeholders for school-based interventions, including non-governmental organizations, government agencies, experts, influencers, and leaders within the community. These stakeholders can influence norms and implement interventions both within and beyond schools (SAMHSA, 2020). The broader social environment plays a crucial role in shaping children's and

adults' behaviours through modelling and reinforcement. Moreover, experts, along with these leaders, can foster life skills by offering guidance, resources, and support systems for schools and families.

Overall, these findings align with i-Cegah's policies on drug prevention education and community mobilization (NADA, 2022). They also contribute to the prevention theories outlined in the *Focus on Prevention Guidelines for Drug and Substance Use* (SAMHSA, 2020). The intervention content supports the behaviour change model for both children and parents. The community organization theory highlights the role of external stakeholders in interventions, while the health belief model suggests that parents are more likely to adopt healthy behaviours when they recognize the importance of avoiding drug use. Additionally, the diffusion of innovation framework illustrates how teachers and counsellors can set trends among students, while external stakeholders, such as community leaders, religious figures, and local artists, can influence adults in school-based interventions.

CONCLUSION

This research emphasizes the need for early preventive interventions for children aged 7 to 9, focusing on age-appropriate drug prevention programs, whether universal, selective, tiered, or indicated. It highlights the importance of considering individual, social, and cultural factors in designing interventions, with a focus on developing life skills such as decision-making,

emotional regulation, and peer resistance. Effective school-based programs require collaboration among parents, teachers, and counselors, supported by the community and various organizations. By addressing the unique needs of younger children, these interventions, whether universal, selective, tiered, or indicated, can better equip them to resist harmful behaviours and contribute to long-term positive outcomes.

The implications of this research highlight the need for early, targeted interventions in lower elementary schools, focusing on promoting personal and social development through curriculum, programs, and policies. It suggests revising drug prevention programs to be developmentally appropriate for children aged 7 to 9 and integrating prevention efforts into the school curriculum while involving parents through workshops. The findings emphasize the importance of community collaboration, particularly in reflecting local cultural values and fostering cross-sector partnerships among education, health, and social welfare. The study also recommends the implementation of pilot programs and a scalable framework for resource allocation, training, and evaluation. These findings contribute to global early prevention efforts and offer valuable insights for adapting interventions in diverse cultural and educational contexts.

This research has several limitations. The sample size, while adequate for qualitative saturation, and its geographical focus may not represent the broader experiences of all Malaysian schools, particularly private or

international ones. Language translation issues could have affected the accuracy of responses, and the researcher's language proficiency may have influenced question phrasing and interpretation, despite efforts to minimize this. Additionally, challenges such as social stigma around drug use, limited resources in rural schools, and parental resistance may hinder the implementation of proposed interventions.

Future research on school-based drug prevention for lower elementary schoolchildren in Malaysia should focus on age-appropriate content that promotes personal and social development, such as drug refusal skills, emotional regulation, decision-making, and communication. Studies should also establish guidelines for identifying at-risk students. Expanding research to include upper elementary, secondary, private, and international schools, as well as tertiary institutions, could offer a broader community perspective. Longitudinal studies are needed to assess the long-term impact of early drug prevention. Additionally, future research should explore different school contexts, regions, and demographics to identify factors influencing positive outcomes. Research should also address implementation barriers like school resources, staff availability, and costs, while exploring how interventions can be scaled in both urban and rural settings.

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REFERENCES

- Abu Bakar, A. Y., & Ishak, N. Y. (2014). Depression, anxiety, stress and adjustments among Malaysian gifted learners: Implication towards school counselling provision. *International Education Studies*, 7(13), 6-13. <https://doi.org/10.5539/ies.v7n13p6>
- Amat, S. (2018). Guidance and counselling in schools. In *Proceedings of the 3rd International Conference on Current Issues in Education (ICCIE 2018)* (Vol. 326, pp. 13–18). Advances in Social Science, Education and Humanities Research. <https://doi.org/10.2991/iccie-18.2019.3>
- Baharudin, R., Juhari, R., Abu Samah, A., Jopei, T., Md. Noor, A., & Abu Talib, M. (2005). Predictors of conduct problems amongst school-going adolescents in West Malaysia. *Malaysian Journal of Social Policy and Society*, 2, 92–107.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Bierman, K. L., Brown, C. H., Clayton, R. R., Dishion, T. J., Foster, E. M., Glantz, M. D., Greenberg, M. T., Hops, H., Oetting, E. R., Sloboda, Z., Spoth, R., Reid, J. B., & Wills, T. A. (2011). *Preventing drug use among children and adolescents: A research-based guide for parents, educators, and community leaders* (2nd ed.). National Institute on Drug Abuse.
- Biglan, A., Domitrovich, C., Ernst, J., Etz, K., Mason, M. J., Robertson, E., Sloboda, Z., & Ulmer, L. (2011). *Standards of knowledge for the science of prevention*. Society of Prevention Research.
- Botvin, G. J., & Griffin, K. W. (2015). Life Skills Training: A competence enhancement approach to tobacco, alcohol, and drug abuse prevention. In L. M. Scheier (Ed.), *Handbook of adolescent drug use prevention: Research, intervention strategies, and practice* (pp. 177–196). American Psychological Association. <https://doi.org/10.1037/14550-011>
- Centers for Disease Control and Prevention. (2024, September 5). *Information About Young Children (Ages 4-11)*. Parent Information. <https://www.cdc.gov/child-development/positive-parenting-tips/middle-childhood-6-8-years.html>
- Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). Sage.
- Che Rozubi, N., Mohd Razali, M. M. S., Mohd Daud, N. A., Kee, P., Omar, M. A. & Hasbullah, H. (2023). Keberkesanan Program PINTAR 2.0 dalam kalangan kanak-kanak di negeri-negeri berisiko di Malaysia [Effectiveness of the PINTAR 2.0 Program among children in high-risk states in Malaysia]. *Jurnal Antidadah Malaysia*, 13(1), 100–110.
- Chelvi, T. (2024, October 14). Rising trend of drug abuse among primary and secondary students alarming, youngest addict only 11, says National Anti-Drugs Agency. *Malay Mail*. <https://www.malaymail.com/news/malaysia/2024/10/14/rising-trend-of-drug-abuse-among-primary-and-secondary-students-alarming-youngest-addict-only-11-says-national-anti-drugs-agency/153589>
- Cherry, K. (2024, May 2). *Erik Erikson's Stages of Development: A Closer Look at the Eight Psychosocial Stages*. Very Well Mind. <https://www.verywellmind.com/erik-eriksons-stages-of-psychosocial-development-2795740>

- Chie, Q. T., Tam, C. L., Bonn, G., Wong, C. P., Dang, H. M., & Khairuddin, R. (2015). Drug abuse, relapse, and prevention education in Malaysia: Perspective of university students through a mixed methods approach. *Frontiers in Psychiatry*, 6, Article 65. <https://doi.org/10.3389/fpsyt.2015.00065>
- Costa, C., Breda, Z., Pinho, I., Bakas, F., & Durão, M. (2016). Performing a thematic analysis: An exploratory study about managers' perceptions on gender equality. *The Qualitative Report*, 21(13), 34–47. <https://doi.org/10.46743/2160-3715/2016.2609>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Sage.
- Daily School Management Section. (2022). *Buku panduan pengurusan pendidikan pencegahan dadah di sekolah PPDa*. [Guidebook for managing drug prevention education in schools (PPDa)]. Ministry of Education.
- Denham, S. A., & Burton, R. (2003). *Social-emotional development in early education*. Thomson Delmar Learning.
- Esterberg, K. G. (2002). *Qualitative methods in social research*. McGraw-Hill.
- European Union Drugs Agency. (2010, July). *Prevention and evaluation resources kit (PERK): Models and theories*. https://www.euda.europa.eu/publications/perk/resources/step2a/theory_en
- European Union Drugs Agency. (2019). *European prevention curriculum (EUPC): A handbook for decision makers, opinion makers, and policy makers in science-based prevention of substance use*.
- Furu, A.-C., Chan, A., Larsson, J., Engdahl, I., Klaus, S., Navarrete, A. M., & Turk Niskač, B. (2023). Promoting resilience in early childhood education and care to prepare children for a world of change: A critical analysis of national and international policy documents. *Children*, 10(4), 716. <https://doi.org/10.3390/children10040716>
- Gabrhelik, R. (2020). *Introduction to evidence-based prevention (INEP)*. Charles University.
- Green, J., & Thorogood, N. (2018). *Qualitative methods for health research* (4th ed.). Sage.
- Guest, G., Bunce, A., & Johnson, L. M. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18(1), 59–82. <https://doi.org/10.1177/1525822X05279903>
- Handrianto, C., Jusoh, A. J., Goh, P. S. C., Rashid, N. A., Abdullah, A., & Rahman, A. (2021). Teaching competency of teachers for curbing drug and substance abuse (DSA) in Malaysian secondary schools. *Journal of Drug and Alcohol Research*, 10(11).
- Institute for Public Health. (2023a). *National Health and Morbidity Survey 2022: Adolescent Health Survey Report*. Ministry of Health Malaysia.
- Institute for Public Health. (2023b). *National Health and Morbidity Survey 2022: Adolescent Health Survey Infographic*. Ministry of Health Malaysia.
- Jusoh, A. J., Handrianto, C., Walid, D. A., Wahab, S., & Rasool, S. (2023). Drug prevention education programs in schools in high-risk areas: Challenges for primary school teachers in Malaysia. *Al Ibtida: Jurnal Pendidikan Guru MI*, 10(1), 1-12. <https://doi.org/10.24235/al.ibtida.snj.v10i1.12984>
- Kaur, B. (2019, April 27). *Kids as young as 7 are taking drugs*. News Straits Times. <https://www.nst.com.my/news/crime-courts/2019/04/483451/kids-young-7-are-taking-drugs>
- Low, S. K., Kok, J. K., & Lee, M. N. (2013). A holistic approach to school-based counselling and guidance services in Malaysia. *School Psychology International*, 34(2), 190–201. <https://doi.org/10.1177/0143034312453398>

- Mansor, A. N., Sanasi, J., Mohd Nor, M. Y., Nasir, N. M. & Wahab, J. A. (2017). Teacher perceptions of managing indiscipline amongst at-risk teenage students: A Malaysian study. *International Journal of Advanced and Applied Sciences*, 4(5), 112–119. <https://doi.org/10.21833/ijaas.2017.05.020>
- Maxwell, J. A. (2013). *Qualitative research design: An interactive approach*. Sage.
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. Jossey-Bass.
- Mohd Jais. S. (2012). *Malaysian school counsellor's perspectives and approaches to identifying and assisting at-risk students through counselling interventions* [Unpublished doctoral thesis]. Universiti Pendidikan Sultan Idris. https://ir.upsi.edu.my/files/docs/2020/2634_2634.pdf
- Mohd Nawawi, N. A. A., Othman, E. A., Mohd Nasir, F., Abdullah, K. A., & Baharudin, M. N. (2024). Drug addictions in Malaysia: A mini-review on drug types, rehabilitation centers, and therapeutic programs. *Journal of Ethnicity in Substance Abuse*. Advance online publication. <https://doi.org/10.1080/15332640.2024.2336495>
- Naisola-Ruiter, V. (2022). The Delphi technique: A tutorial. *Research in Hospitality Management*, 12(1). <https://doi.org/10.1080/22243534.2022.2080942>
- National Anti-Drugs Agency. (2016). *Garis Panduan Program Intelek Asuhan Rohani (PINTAR 2.0)*. [Guidelines for the Program Intelek Asuhan Rohani Program (PINTAR 2.0)]. National Anti-Drugs Agency.
- National Institute on Drug Abuse. (2020). *Preventing drug misuse and addiction: The best strategy*. <https://nida.nih.gov/publications/drugs-brains-behavior-science-addiction/preventing-drug-misuse-addiction-best-strategy>
- National Anti-Drugs Agency. (2022, 6 October). *Implementation phase of the i-Cegah model* [Conference presentation]. Simposium Sains Penagihan Dadah Kebangsaan 2022, Cyberjaya, Malaysia.
- National Anti-Drugs Agency. (2023). *Drug free educational institutions*. Retrieved May 3, 2024, from <https://www.aadk.gov.my/en/prevention/drug-free-educational-institutions/>
- National Anti-Drugs Agency. (2024). *Corporate info: About NADA*. Retrieved May 3, 2024, from <https://www.aadk.gov.my/en/corporate-info/about-nada/>
- Neighbors, C., Young, C. M., Krieger, H., & Tackett, J. L. (2016). Social influence, pressure, and norms: Vulnerability for substance use in adolescents. In C. E. Kopetz & C. W. Lejuez (Eds.), *Addictions: A social psychological perspective* (pp. 170–198). Routledge/Taylor & Francis Group.
- O'Connell, M. E., Boat, T., & Warner, K. E. (2009). *Preventing mental, emotional, and behavioural disorders among young people: Progress and possibilities*. National Academies Press. <https://doi.org/10.17226/12480>
- Patton, M. Q. (2002). Two decades of developments in qualitative inquiry: A personal, experiential perspective. *Qualitative Social Work*, 1(3), 261–283. <https://doi.org/10.1177/1473325002001003636>
- Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). SAGE.
- Paz Castro, R., Haug, S., Wenger, A., & Schaub, M. P. (2022). Longer-term efficacy of a digital life-skills training for substance use prevention. *American Journal of Preventive Medicine*, 63(6), 944–953. <https://doi.org/10.1016/j.amepre.2022.06.017>
- Rahimi, M. K. A., Abdul Rahman, K., & Sabri, F. (2019). Relationship between emotional states and coping styles among high-risk students. *Journal of Islamic Social Sciences and Humanities*, 21(1). <https://doi.org/10.33102/abqari.vol21no1.223>

- Ranaweera, S., & Samarasinghe, D. (2006). *Prevention of drug use in schools* (World Health Organization. Regional Office for South-East Asia Ed.). World Health Organization.
- Ratnayake, Y. (n.d.). *Chapter XI: Prevention of drug abuse in South Asia*. UNODC.
- Scheier, H. J. (2012). Primary prevention models: The essence of drug abuse prevention in schools. In *Addiction syndrome handbook: Vol. 2. Recovery, prevention, and other issues* (pp. 149–161). American Psychological Association.
- Smith, M. A. (2021). Social learning and addiction. *Behavioural brain research*, 398, Article 112954. <https://doi.org/10.1016/j.bbr.2020.112954>
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Grounded theory procedures and techniques*. Sage.
- Stringer, H. (2022). A stronger case for early substance use prevention. *Monitor on Psychology*, 53(2).
- Substance Abuse and Mental Health Services Administration. (2019). Substance misuse prevention for young adults: Evidence-based resource guide series (Publication No. PEP19-PL-Guide-1). U.S. Department of Health and Human Services. <https://pttcnetwork.org/wp-content/uploads/2020/04/SAMHSA-Resource-Guide-Young-Adults.pdf>
- Substance Abuse and Mental Health Services Administration. (2020). *Focus on prevention: Strategies and programs to prevent substance use* (Publication No. SMA10-4120). U.S. Department of Health and Human Services. <https://www.prevention.org/Resources/b4892ed4-e0f2-4fd7-9471-fcf9693021f5/Focus%20On%20Prevention-colon-%20Strategies%20and%20Programs%20to%20Prevent%20Substance%20Use.pdf>
- Tai, S. S., & Abu Bakar Ah, S. H. (2016). The untold truancy stories: A case study in Malaysia. *The Malaysian Journal of Social Administration*, 12(1), 76–99. <https://doi.org/10.22452/mjsa.vol12no1.4>
- Tan, H. J., Yee, A., Ahmad Hatim Sulaiman, Mas Ayu Said, Mahmoud Danaee, & Ahai, C. L. (2018). Effects of a school-based substance use prevention program on students in Malaysia. *Journal of Health and Translational Medicine*, 21(1), 40–46.
- United Nations. (2002). *A participatory handbook for youth drug abuse prevention programs: A guide for development and improvement*. https://www.unodc.org/documents/drug-prevention-and-treatment/E_handbook.pdf
- United Nations Office on Drugs and Crime. (2003). *Drug abuse treatment toolkit: Drug abuse treatment and rehabilitation: A practical planning and implementation guide*. https://www.unodc.org/docs/treatment/Guide_E.pdf
- United Nations Office on Drugs and Crime. (2004). *Handbook on drug abuse prevention: A school-based approach*. https://www.unodc.org/pdf/youthnet/handbook_school_english.pdf
- United Nations Office on Drugs and Crime, & World Health Organization. (2018). *International standards on drug use prevention: Second updated version*. https://www.unodc.org/documents/prevention/standards_180412.pdf
- Volkow, N. D., Michaelides, M., & Baler, R. (2019). The neuroscience of drug reward and addiction. *Physiological Reviews*, 99(4), 2115–2140. <https://doi.org/10.1152/physrev.00014.2018>
- World Health Organization. (2017). *Global accelerated action for the health of adolescents (AA-HA!)*. <https://www.who.int/publications/item/9789241512343>