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Posted Date: 4 June 2025

doi: 10.20944/preprints202506.0131.v1

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An Exploration of Factors Influencing Substance Use Among Older Adolescents in Mdantsane Township, South Africa

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Abstract: There is a growing burden of substance use among older adolescents and young people in South Africa, which has adverse social, mental and physical well-being. The study aimed to explore the factors influencing substance use among older adolescents in Mdantsane township, South Africa. A qualitative approach with a descriptive design was used. Purposive sampling and snowballing were done to select older adolescents who used substances. Data were collected using semi-structured interviews and analysed thematically using Tesch's eight steps of thematic analysis. The sample of older adolescents consisted of 19 participants, and most (84.2%) were male. The study found that protective factors were parental disapproval and health education. Factors that influenced substance use were adolescent free time, extended family who used substances, socio-cultural aspects and peer pressure. From this study, it is concluded that health education and context-specific interventions can prevent substance use among older adolescents in Mdantsane. Future studies may include parents of substance using older adolescents.

Keywords: substance use; older adolescents; Mdantsane; alcohol; South Africa; peer pressure; parental disapproval

1. Introduction

Substance use among school-going older adolescents is problematic due to its adverse effects on physical, mental, and social well-being. These effects on social and mental well-being further culminate in poor academic performance due to absenteeism and poor classroom discipline, affecting adolescents' future achievements [1]. In sub-Saharan African countries between the years 2000 and 2016, it is estimated that 41.6% of adolescents used substances [2]. Several factors, such as peers and the socioeconomic environment, influence adolescent substance use [3,4]. This study sought to explore factors influencing substance use among older adolescents in Mdantsane Township, South Africa.

Among adolescents, substance use is mainly initiated at 15 years or late adolescence up to 18 years [1,5,6]. Globally common abused substances include alcohol, Khat, cocaine, heroin and cannabis [7]. In sub-Saharan Africa, adolescents are inclined to abuse substances such as alcohol, cannabis, Khat, and amphetamines [2,5]. Within sub-Saharan Africa, the type of substance commonly used also varies by region; for example, caffeine-containing substances are most often used in West Africa [2]. Concerning alcohol abuse in South Africa, it is estimated that at least 80% of male mortality is associated with alcohol use [4]. This high male mortality related to alcohol use parallels studies which confirm that among adolescents, the male gender is associated with high levels of substance use [5–7]. Notwithstanding the consensus that male adolescents have higher levels of substance use, a study in Cape Town, South Africa, presents a contrasting perspective. In the Cape Town study, the authors argue that the social and physical environment strongly influences the use of substances among young women [8]. In the study, Browne et al. found that 39% of females had used marijuana, and this use of illicit substances was significantly correlated to interaction with gang members or

 doi:10.20944/preprints202506.0131.v1

being part of a gang [8]. Like the findings by Browne et al. in Limpopo province (South Africa), while boys had an overall higher use of substances, cumulatively, girls used alcohol more [9].

Several other factors influence the use of substances among adolescents. These factors include familial issues like the presence of family members who use substances, low parental education, negligence, low parental discipline, pressure to meet family demands, guardians who do not understand adolescent problems and lack of family cohesion [7,10,11]. In addition, community-related factors influence substance use among adolescents. These community-related factors include the presence of substance-using peers and easy access to illicit substances [5,10–12]. Nawi et al. explain that there are societal factors influencing the use of substances, such as poverty, unemployment and exposure to adverts on substance use [11]. Regarding familial influence on adolescent substance abuse, evidence from China and Bhutan revealed that parents' behavioural control (especially during adolescent free time) and a positive relationship between adolescents and parents were protective of adolescent substance abuse [13,14]. Whilst parents play a significant role in ensuring adolescents do not abuse substances through fostering good relations and moulding adolescent behaviour, role modelling from family and parents predicts adolescent substance use. Parents are often children's first socialisation, channelling children's cognition of substances such as alcohol [15]. Children, from early ages, frequently observe what precedes parents' use of alcohol (for example, celebratory news), contexts where their parents use alcohol, like family gatherings and the effects of alcohol use [15]. This observation of parents often predicts the use of substances during adolescence [15]. Confirming such role modelling, in the USA, Zaso et al. found that fathers' use of alcohol predicted the use of alcohol among adolescents [15]. Although parents' use of substances plays a key role in fostering alcohol use among adolescents, another USA study compared the influence of parents to a dating partner and concluded that dating partners had more influence on alcohol use, especially among older male adolescents [16].

Peers like parents significantly influence substance use among adolescents. In communities where peers disapprove of substance use, there is less likelihood that adolescents will use substances [17]. For example, a USA study found that peer disapproval of substance abuse (marijuana) was more influential than parental disapproval [17]. In South Africa, the influence of peers on adolescent substance use is reflected in the Cape Town study by Browne et al., which concluded that interactions with substance-using gang members or being a gang member were correlated with substance use among adolescent girls aged between 16 and 19 years [8]. In the Eastern Cape Province, the issue of peer pressure is described in an Ingquza district study, which found that adolescents began using cannabis to gain acceptability among peers (conformability) and were also influenced by family [18].

Some reviewed studies [8,12,18] from South Africa highlight substance abuse, illustrating the influence of peers and family relations; these studies outline context-specific influences which may not be transferable to Mdantsane township. For example, Browne et al. drew their conclusion from a sample of adolescent girls influenced by gangsterism in Cape Town [8]. However, to the best of our knowledge, literature that explores substance use among older adolescents in Mdantsane is limited. This study, conducted in the Eastern Cape Province in Mdantsane township, sought to fill this population gap where there is an underrepresentation of a particular population (adolescents in Mdantsane) in extant literature. Therefore, the purpose of the study was to explore factors influencing substance use among adolescents in Mdantsane, South Africa.

The study was guided by the socio-ecological model, which outlines five levels of systems that positively or negatively influence individual health behaviours [19]. These systems are organised as nested circles, with the core being the individual. Surrounding the individual is the microsystem, which has the strongest influence and may include the family [19]. Surrounding the microsystem is the mesosystem, which denotes the influences of friends or the school system [19]. The mesosystem, in turn, is subsumed by the exosystem, which denotes values and religious beliefs shaping the community [19]. The exosystem is surrounded by the chronosystem, which outlines the policies influencing health [19].

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2. Materials and Methods

The study used a qualitative approach with an exploratory, descriptive study design. The study design was chosen as it enabled a comprehensive description of the influences of substance use among older adolescents. The study was conducted in Mdantsane, a large township in the Eastern Cape Province in South Africa, established in the 1960s [20]. Most residents in the township are youths below the age of 35, who comprise about 60% of the total population of 262 000 people [20]. The socio-economic environment in Mdantsane is characterised by high unemployment, poor social infrastructure and inadequate provision of basic amenities [20].

The study population was substance-using adolescents (boys and girls) from the ages of 16 to 19 years who were from high schools in the NU3 area of Mdantsane. The study excluded adolescents who were not at school at the time of data collection or those who declined to participate. Purposive sampling and snowballing were used to select participants until data saturation was reached.

Data were collected using individual face-to-face interviews. Interviews were conducted in isiXhosa and English by a male researcher, HM. At the time of data collection, HM had completed an undergraduate degree in health promotion and was pursuing a postgraduate diploma in the same field of study. As part of post-graduate training, HM was trained to collect qualitative data. Before the interviews, the researchers did not have any relationship with the participants and were interested in the issue because of the increase in adolescent substance use in South Africa. A pilot study was conducted in June 2024 with four participants who were not included in the final sample. Each interview lasted about 40 minutes, and data were collected from the 1st to the 31st of July 2024. Interviews were conducted in a private room at schools.

A semi-structured interview guide was used to collect the data. Broad topics included in the interview guide were how friends, family and the community they lived in discouraged or influenced substance use. All interviews were audio-recorded with consent from the participants. The researcher also took field notes during the interviews, where gestures and non-verbal cues were recorded.

Data analysis was done using Tesch's eight steps of thematic analysis by two researchers, NLM and MF, independently [21]. To analyse data, all transcribed data were read carefully alongside the field notes, while key issues aligned with the research question were noted. The researchers then selected six transcripts that had been read, and meanings from each were noted by ascribing topics to key issues. These topics included "health education", "peer pressure", and "observing family." The emerging issues were then grouped; for example, "health education" was grouped with "parents disapproving." These grouped issues were then assigned alphabetical codes and assigned to topics. Descriptive labels were transferred to the codes, and topics and lines were drawn between related codes. The researchers then reviewed this initial analysis and produced a final report on the study.

Lincoln and Guba's (1985) four criteria framework was used to ensure trustworthiness [22]. Credibility was guaranteed by member checking, which entailed presenting the study findings to participants to ensure the findings reflected what was discussed in the interviews and not the researcher's experiences. The collection of field notes during the interviews further ensured credibility. Dependability was ensured by using two researchers, NLM and MF, to conduct the data analysis. The researchers ensured transferability by detailing the study setting, and confirmability was guaranteed by documenting the study procedures.

To minimise bias, the researchers reflected on their experiences and roles throughout the data collection and analysis. The researcher HM reflected on their work in health promotion, while NLM and MF reflected on their previous roles in health service delivery and current roles as researchers.

The study was conducted following the rules of the Declaration of Helsinki 1975, revised in 2013. The study received ethical approval from the Walter Sisulu University Health Sciences Ethics and Biosafety Committee, approval number 025/2023. The participants gave their individual written consent to participate. Confidentiality was ensured by using pseudonyms for participants, who were assured that the information they shared would not be traced to them. All study materials were locked safely in a cupboard and/ or a password-protected computer accessible only to researchers.

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3. Results

3.1. Sample Characteristics

The sample was 19 older adolescents. The ages of the participants ranged from 16 to 19 years, with an average age of 17.2 years. Most (84.2%) participants were male. The participants were in Grades 10, 11 and 12, with most (36.8%) in Grade 12. The participants also stated the various substances they used, and all participants used alcohol. Participants were all black Africans. Table 1 below shows the sample characteristics.

Table 1. Sample characteristics.

Characteristic	Total
Total participants	19
Ages	
16	6
17	6
18	4
19	3
Gender	
Male	16
Female	3
Grades	
Grade 10	6
Grade 11	6
Grade 12	7
Substances used	
Alcohol	19
Tobacco smoking	8
Other substances (hubbly and cannabis)	3

Source: Researchers.

3.2. Themes

The study found two main themes: the first was protective factors of adolescent substance use. The first theme included two subthemes: parental disapproval and health education, and health education from school and the local Department of Health. The second main theme was factors influencing substance use among adolescents. The second theme was supported by four subthemes: individual factors, peer pressure, extended family influence, and socio-cultural influences.

3.1.1. Theme 1: Protective Factors of Adolescent Substance Use

The first theme described the protective factors of older adolescent substance use. From the data analysed, the participants highlighted how their parents discouraged substance use, the health education they received from school and the Department of Health, as well as messages they saw in the media discouraging substance use.

- Parental health education and disapproval

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Parental disapproval and health education show how, at the microlevel, there were aspects that protected adolescents from using substances. Some participants, like P3 and P14, interviewed shared how their parents disapproved of them using substances and provided health education, countlessly discouraging them from using substances.

"I have received health education many times, if I count my parents..." ***P3, 16-year-old male, Grade 10***

"And even at home…my mother tells me [about substance use] almost every weekend…" ***P14, 18-year-old male Grade 12***

In addition to parents providing health education to discourage adolescents from using substances, there were participants who also shared that they were discouraged from continued substance use because they were aware that their parents disapproved.

"If my parents find out, then I would be forced to stop." ***P10, 17-year-old male, Grade 10***
"No, they [parents] don't know that. I don't even want them to know. I would never be able to explain why I am drinking. And again, I don't drink near my home; I drink far." ***P15, 18-year-old male, Grade 12***
'I also feel bad because my parents don't know me, and if they do, I would have disappointed them." ***P11 19-year-old male Grade 12***

- Health education at schools and from institutions in the community.

The health education received at schools showed how the mesolevel interactions also served to protect older adolescents. Participants shared experiences of receiving health education from teachers, not-for-profit organisations which visited the schools, and TV adverts discouraging them from using substances. Some quotes from the participants illustrating how the schools endeavoured to protect the adolescents are shown below.

"There are some organisations [not-for-profit organisations] that come by at school to give us lessons regarding substances…even at school they tell me, and as well as in clinics." ***P14, 18-year-old male, Grade 12***
"There are people who work at the Department of Health who sometimes come to school and give us health education regarding substance abuse. I would say I receive it about 2 times per month. That is why I want to quit it very soon." ***P13, 19-year-old male Grade 12***

3.1.2. Theme 2: Influences of Substance use Among Adolescents

Although parents and institutions in the community discouraged older adolescents from using substances, the study also found that there are several issues at the individual, family and community levels that influence substance use.

- Individual influence: Free time during weekends

An individual level issue highlighted by the participants was having "free" time, during which they would use substances. Quotes from the participants highlight this issue:

"I must be busy every day so that I can avoid it, even on weekends, I must be busy, whether it is a job or school that gets me busy. Sometimes when the weekend comes, it's not like Wednesday, for example, but when you know it's Friday, for example, you know you must drink. If Friday or Saturday comes and you're busy with something, that means you can't go out and drink." ***P6 16-year-old male Grade 10***

"If I could only be busy even on weekends, I would stop doing these things [using substances]." ***P4, 18-year-old male Grade 11***

- Peer Pressure

Participants explained how peer pressure contributed to the choice of substances used, the continued use of substances and initiating substance use. The quote from P14, who had indicated

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how they are constantly educated by their mother and school about substance use, broadly shows peer influence in substance use. Interestingly, some participants like P10, P11 and P15 described how peers influenced their use of substances despite sharing how their parents disapproved, which shows their rationalisation of using substances.

"You know, friends are always influencing me, and I don't say I hate that." ***P14, 18-year-old male, Grade 12***
"All of my friends drink [alcohol] like I am drinking; some drink more than I do. We all drink." ***P15, 18-year-old male, Grade 12***

From the participants' shared experiences, peers influenced the type of substances used. Quotes from participants P4, P5 and P11 show how peers influenced alcohol use and smoking.

"I was 14 years old when I started drinking. I just started smoking about a year ago with my friends at a party." ***P4 18-year-old male Grade 11***
"Peer pressure. Because no one will go with you out if you go there to drink water or a Coke, I also need to be in the vibe. It's just peer pressure. No one will buy you water at the groove." ***P5, 19-year-old male Grade 12***
"*It becomes easy to start using substances when* your *friends do it*; all my friends, yes, all of them use the same substances…alcohol, smoking cigarettes…" ***P11, 19-year-old male Grade 12***

Additionally, participants reflected on how their first encounter with substance use was with their friends. The first use of substances, from their descriptions, could be at school or in the neighbourhood, but always with friends. The excerpts of responses on when they started using substances shown below support the issue of peer influence on substance use.

"I started drinking with my friends, as well as smoking, in my area." ***P2 16-year-old female Grade 11***
"I was taught by my friend…the people you hang around with will teach you if you are interested; in most cases, you are easily influenced." ***P7 16-year-old male Grade 11***
"I started in my community at a corner house we used to sit in with my friends." ***P9 17-year-old male Grade 10***
"I started here when I came from Jozi [Johannesburg]. When I got here, I learnt about groove, going out at night with friends and getting drunk." ***P14 18-year-old male Grade 12***

Peer pressure further sustained the use of substances among the adolescent participants in Mdantsane. From their shared experiences, the continued need to fit in or occasional celebratory visits from friends would foster the use of substances.

"I drink for fun, to just fit in with my friends." ***P10 17-year-old male Grade 10***
"I would say it's peer pressure because it's one of those days when friends will come over and ask me out to drink since it's December." ***P11 19-year-old male Grade 12***

- Extended family influence

One of the subthemes that supported the main theme of issues influencing substance use among adolescents was extended family influence. From the participants' descriptions, the older adolescents noted how they modelled substance use from extended family members like uncles and aunts who used substances. The quotes to support these are shown below:

"I see my aunts and uncles, they all drink, "It's just seeing these people as you grow up and wanting to taste it for yourself", ***P4, 18-year-old male Grade 11***
"I use the same substances as my uncle, who smokes and drinks." ***P7 16-year-old male Grade 11***

- Socio-cultural influences

The study also found that there were socio-cultural influences promoting the use of substances among older adolescents in Mdantsane. In sharing their experiences, the adolescents highlighted how

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they emulated people in the community to use substances and perceived such use of substances as a cultural norm.

"We are more like influenced. Society influences people to use substances; here in the community, using substances becomes a norm." ***P12, 16-year-old female Grade 10***

In some cases, the participants noted how substance use was associated with the celebration of traditional cultural practices, such as traditional male circumcision done in the mountains of the Eastern Cape province. The quotes supporting this subtheme follow.

"I started using [substances] when I was a new man [after traditional male circumcision], my friends and I from the mountains were celebrating our comeback". ***P10 17-year-old male Grade 10***

"At home in the villages, there was an occasion there. I started drinking there last year; my brother was getting initiated to be a mountain man." ***P18 16-year-old male Grade 10***

4. Discussion

The study found that older adolescent substance use is deterred by parental disapproval and health education, as well as health education from schools and institutions in the community, such as clinics and not-for-profit organisations in Mdantsane. Despite the deterrents to substance use, older adolescents also shared that they would use substances in their free time as they were not busy, experienced peer pressure, were exposed to socio-cultural influences, and extended family influences that fostered their use of substances.

Concerning the aspects that deterred the use of substances, a systematic review, [11] confirms these findings, noting that having schools that are connected with organisations that prevent the use of substances and supportive adults who influence adolescents are protective factors. In addition, another systematic review of randomised control trials, which sought to assess the effectiveness of health education in preventing substance use among adolescents, found that health education has a small but significant effect in mitigating the use of alcohol, tobacco, and other drugs [23]. As such, such health education efforts by parents and schools ought to be supported and complemented with other interventions to prevent substance use.

Among the factors fostering substance use was the individual-level factor of substance use during adolescent free time. Participants noted free time, especially during weekends when they are not busy. This use of alcohol during adolescent free time aligns with findings from a Chinese study, which found that lack of parental behavioural control during adolescent free time fosters substance use [14]. Although the findings align, this study also found that adolescents were aware of their parents' disapproval, which could imply that the disapproval may not have culminated in actual behavioural control of adolescent substance use during free time. As such, there may be a need to encourage parents to follow through with their disapproval with actual behavioural control of adolescents' free time. Notably, parents of substance-using adolescents were not included in this study to ascertain whether disapproval did not culminate in actual behavioural control, which is a limitation of this study.

The finding of peer pressure fostering substance use among older adolescents confirms studies conducted in the Eastern Cape [18] and Western Cape [8] provinces in South Africa. This issue of peer pressure fostering substance use is also described in other contexts outside South Africa, such as the USA [24] where it was found that peer influence is stronger than parental influence. As such, peer disapproval is most likely to deter substance use among adolescents [24]. Given this ubiquity of peer pressure on substance use, it may be necessary to consider the influence of peers who do not use substances when developing programs to prevent substance use among adolescents, as described in the study conducted in the USA. Moreover, adolescents in this study also used substances from observing and role modelling extended family members, such as uncles and aunts. The Inguza study findings also report how other adults in the community, such as teachers who may not necessarily

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be extended family members, could also be role models for adolescent substance use [18]. This illustrates an intersection of individual-level factors (whom the adolescent chooses to emulate) and community-level factors (adults in the community who are role models for adolescents) influencing substance use. This may also warrant special consideration when developing health promotion messages for adolescent substance use.

The study also highlighted socio-cultural practices in the Eastern Cape province associated with substance use, such as celebrations to mark completion of initiation to manhood and traditional male circumcision. Traditional male circumcision is commonly practised among the AmaXhosa ethnic group, who constitute the majority tribal group in the Eastern Cape province [25]. Traditional male circumcision is done during an initiation ritual that lasts several weeks in the mountains [26]. Studies exploring the behaviours of male circumcision initiates have also highlighted that the behaviour of initiates is associated with substance use, particularly alcohol [26,27]. This association of substance abuse with cultural practices in the Eastern Cape province illustrates the uniqueness of some contexts in influencing adolescent substance use, therefore warranting culturally sensitive, focused interventions to address the issue.

5. Conclusion

The growing number of adolescents using substances in South Africa is concerning. Considering this, it is necessary to understand factors influencing substance use among adolescents so that context-specific interventions to mitigate substance use can be developed. Therefore, this study sought to explore factors influencing substance use among older adolescents in Mdantsane. The study found that there were protective factors at the microlevel and mesolevel. Furthermore, it was found that older adolescents were influenced by peer pressure, extended family members, socio-cultural aspects and adolescents would use their free time to use substances. Concerning the socio-cultural aspects, the use of substances among adolescents was associated with celebrations after initiation into manhood within the cultural norms of the AmaXhosa ethnic group. This influence of cultural norms influencing substance use warrants culturally sensitive interventions which are context-specific to mitigate substance use among adolescents in Mdantsane. From the study findings, it is recommended that future studies with substance-using adolescents include the perceptions of the parents, as the issue of parental disapproval needs to be ascertained if it culminates in behavioural control during adolescent free time. Notwithstanding this limitation, the study drew its strength from a sample of adolescents who provided adequate data for theme saturation.

Author Contributions: "Conceptualization, H.M. and N.M.; methodology, N.L.M. and M.F; software, N.M. H.M.; validation, N.M., H.M., and M.F.; formal analysis, N.L.M., M.F; investigation, H.M.; resources, N.L.M., H.M; data curation, H.M., N.L.M; writing—original draft preparation, N.L.M.; writing—review and editing, M.F., ; supervision, M.F.; project administration, M.F.; All authors have read and agreed to the published version of the manuscript.

Funding: "This research received no external funding"

Institutional Review Board Statement: The study was approved by the Walter Sisulu Faculty of Health Sciences Research Ethics and Biosafety committee. Approval number 025/2023.

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

Data Availability Statement: The data presented in this study are available on request from the corresponding author due to the need to protect the identities of the older adolescents who participated in this study

Acknowledgments: The authors express their sincere gratitude to the older adolescents in Mdantsane who participated in this study. The authors have reviewed and edited the output and take full responsibility for the content of this publication."

Conflicts of Interest: The authors declare no conflicts of interest

 doi:10.20944/preprints202506.0131.v1

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