



**USING SPORT AS AN INTERVENTION FOR SUBSTANCE ABUSE REDUCTION
AMONG ADOLESCENTS AND YOUNG ADULTS IN THREE SELECTED
COMMUNITIES IN SOUTH AFRICA: AN EXPLORATORY STUDY**

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Acronyms

APA	American Psychological Association
ASSIST	Alcohol, Smoking and Substance Involvement Screening Test
CBOs	Community Based Organisations
CDA	Central Drug Authority
CMDs	Common Mental Disorders
FGDs	Focus Group Discussions
HSRC	Human Sciences Research Council
KIIs	Key Informant Interviews
KZN	KwaZulu-Natal
LDAC	Local Drug Action Committee
NDMP	National Drug Master Plan
NGOs	Non-Governmental Organisations
NPO	Non-Profit Organization
SA	South Africa
SMS	Short Message Service
UNODC	United Nations Office on Drugs and Crime

EXECUTIVE SUMMARY

The global prevalence of substance abuse among youth and young adults is attributed to nearly a tenth (9.8%) of the global burden of disease for young people between the ages of 15 and 29 years. In South Africa, 23% to 41% of individuals below the age of 20 years were admitted into substance abuse treatment centres during 2013 and is a major concern due to the negative impact on the adolescents' school performance, peer group relationships, family engagement and other aspects of an adolescents' life that are pertinent to their development stage. Out of the nine (9) provinces in SA, loveLife identified three (3) communities, which required intervention, namely Kwa-Zulu Natal (KZN), Northern Cape and Gauteng where the prevalence of drug abuse is fairly high among young individuals.

There have been many interventions used to stop or reduce substance use and abuse. However, the success of these intervention programmes has been shown to be limited. Given the fact that adolescents and young adults are in an important developmental stage in their lives, loveLife in collaboration with the Human Sciences Research Council, decided to embark on a project to explore previously undocumented ways of intervening with young individuals with the aim of reducing or stopping their substance abuse behaviours. The study entitled: *“Using sport as an intervention for substance abuse reduction among adolescents and young adults in three selected communities in South Africa: An exploratory study*, was conceptualized and conducted for this purpose. An intervention comprising skateboarding coaching for basic skills combined with a life-skills workshop was utilized in this study.

A qualitative dominant mixed-methods exploratory design was used. During the pre-intervention phase of the study participants between the ages of 12 to 24 years were recruited and enrolled into the study. Enrolment took place once they were identified as being at risk for substance abuse or if they screened positive for substance abuse on the ASSIST. Focus Group Discussions (FGDs) were conducted separately for each of the two target groups, namely the 12 to 17 year old and 18 to 24 year olds. Key informant interviews were conducted with selected parents or legal guardians, principals or Educators, and community representatives.

Due to limitations at the study sites which affected the project plan, it was difficult to increase the response rate for inclusion in the intervention, despite obtaining participant consent; and parental consent and participant assent where applicable. This will be further discussed in the main body of the report. The skateboarding intervention and life-skills workshop was, therefore, only conducted in one of the three selected sites, namely, Eldorado Park. Consequently, the post-intervention FGDs of the target sample were conducted only in Eldorado Park.

The data were analysed using thematic content analysis. Individual interviews conducted among the key informants revealed the following themes:

- Individual level factors;
- Family environment; and
- Community level factors.

In addition, the themes that emerged from the FGDs with young skateboarders as Key Informants were:

- Skateboarding is influenced by exposure to the sport and peer influence;
- Skateboarders have a particular personality;
- Skateboarding has physical and psychosocial benefits;
- Lack of facilities for skateboarding;
- Skateboarding has the potential to reduce substance abuse among young individuals; and
- Recommendations for community-based activities for young individuals.

The findings of the pre-intervention FGDs revealed the following themes for the adolescents (12 to 17 year olds):

- Route to addiction: from experimentation to dependency;
- Family level barriers to reduce substance abuse;
- Community level barriers to substance abuse harm reduction;
- Community level facilitators to promote substance abuse harm reduction;
- Drugs as a tool to cope with stressors;
- Perceived benefits of skateboarding; and

- Recommendations for substance abuse reduction

For the young adults (18 to 24 year old) pre-intervention FGDs the following themes emerged:

- Consequences of substance abuse is at the individual and family levels;
- Gender differences in substance abuse;
- Knowledge of licit and illicit substances;
- Route to addiction: from experimentation to dependency and the “cool factor”;
- Drugs as a tool to cope with stressors, to manage low self-esteem and family dysfunction;
- Normalization of substance abuse at family and community levels;
- Peer pressure;
- Perceived community-level barriers for a healthy life-style;
- Perceived benefits of skateboarding; and
- Recommendations for substance abuse reduction.

At the post intervention phase, FGDs were conducted to ascertain the benefits of the skateboarding coaching and life-skills workshop that the adolescent and young adult participants received. The themes that emerged from the FGDs with the 12 to 17 year olds were as follows:

- Agreeing to participate: hoping for a positive outcome;
- The “excitement” factor;
- The “value” factor: inspirational, encourages perseverance, overcoming challenges and influences attitudinal change; and
- Barrier to success: insufficient number of skateboards

The findings revealed that the intervention had a positive influence on the primary outcome measure, namely an overall reduction in substance abuse among the target group at the intervention site in Eldorado Park. However, reduction in alcohol and cannabis use in particular, was not found.

The results of the study, albeit an exploratory one, shows promise in implementing a sport and life-skills intervention package to reduce substance use and abuse. It is

recommended that the local authorities negotiate with the Departments of Sport and Recreation, and Social Development for the installation of skateboarding facilities in underserved communities. Additionally, it is recommended that a private partnership is entered into with loveLife to provide skateboards to young individuals in the affected communities who will benefit from taking up the sport to facilitate the reduction in substance abuse.

1. INTRODUCTION

1.1. Background

The definition of substance abuse used in this project is in keeping with that of the National Drug Master Plan (2013-2017) [NDMP] developed by the Department of Social Development. The NDMP defines substance abuse as: “*The misuse and abuse of legal or licit substances such as nicotine, alcohol, over-the-counter and prescription medication, alcohol concoctions, indigenous plants, solvents and inhalants, as well as the use of illegal or illicit substances*” (p 19).

Substance abuse, including the abuse of alcohol, licit and illicit drugs among youth and young adults is a challenge across the world. An estimation of 3.5% to 7.0% (i.e. between 162 million and 324 million) of the world’s population aged 15 to 64 years had used an illicit substance (United Nations Office on Drugs and Crime [UNODC], 2014) Consequently, alcohol and illicit substances abuse contribute to nearly a tenth (9.8%) of the global burden of disease for young people between the ages of 15 and 29 years (Hamdulay & Mash, 2011). In the United States of America, Kann et al. (2014) found that the national lifetime prevalence of cigarette abuse was 8.8%, alcohol abuse 66.2%, cannabis abuse 40.7%, inhalant abuse 8.9%, hallucinogens abuse 7.1%, ecstasy use 6.6%, cocaine use 5.5%, and heroin use was 2.2% among high school students across the country. In Nigeria the lifetime prevalence rates of abusing any kind of substance in urban and rural locations respectively was 66.0% and 65.7% (Ogunsola & Fatusi, 2016). An important observation showed that in developed countries (i.e. high income countries) alcohol and illicit substance abuse prevalence rates have stabilised, yet it continues to escalate in developing countries (i.e. low-to-middle income) countries (Ogunsola & Fatusi, 2016).

In South Africa (SA), 23% to 41% of individuals below the age of 20 years were admitted into substance abuse treatment centres during 2013 (Dada et al., 2014). There are variations in the type of substances abused and the prevalence of abuse across the nine (9) provinces in SA. In 2014, for example, Gauteng and KwaZulu-Natal (KZN) provinces had an increase in cannabis use as a primary substance of abuse (Dada et al., 2014). Findings from a study conducted in Atteridgeville, Gauteng Province, among secondary school learners (grades 8 to 11), demonstrated that the lifetime prevalence rates of alcohol and cannabis abuse was 51.4% and

13.2% respectively. Past-month prevalence was found to be 14.0% for alcohol and 4.0% for cannabis (Moodley, Matjila, & Moosa, 2012). In a study conducted in a rural community of KZN, alcohol was found to be the most common substance abused among high school learners (Moodley et al., 2012).

The most frequently abused substances among young people across SA are alcohol, tobacco and cannabis (Dada et al., 2013; Moodley et al., 2012; Morojele, Parry, Brook, Abuse, & Africa, 2009). Peltzer et al. (2012) found that at least 40% of young adults (18 to 24 year olds) reported consuming an alcoholic drink in the past 12 months. Of the 40% (N=920) who reported that they consumed alcohol, 18.2% of males stated that they consume 10 or more drinks on a typical day when they drink. This implies that they engaged in binge drinking. The findings of the National Youth Risk Behaviour Survey conducted in 2011, among South African high school learners, found that the life-time prevalence of cannabis was 12.8%; inhalants was 11.5%; methamphetamine (commonly known as tik) was 5.5%; mandrax was 5.4%; heroin was 5.3%, cocaine was 4.9%; 'Whoonga' was 4.5% and over the counter or prescription drugs for the purpose of 'getting high' was 11.5% (Reddy et al., 2013). Overall more males were found to abuse illicit substances (Peltzer et al., 2012).

The negative effects of substance abuse have been confirmed in international and national studies. Violent behaviour, getting involved in criminal activities and injuries are often a consequence of substance abuse (Khan, Savahl, & Isaacs, 2016; Reid, Garcia-reid, & Mcdougall, 2008; Valdez, Kaplan, & Curtis, 2007). Other social consequences of substance abuse include sexual risk-taking behaviours (Abbey, 2011; Plüddemann, Flisher, Mathews, Carney, & Lombard, 2008), academic difficulties (Townsend, Flisher, & King, 2007), and poor mental and physical health outcomes (Espada, Sussman, Medina, & Alfonso, 2011; N. Morojele et al., 2013; Plüddemann, Flisher, McKetin, Parry, & Lombard, 2010) have also been identified as being associated with substance abuse.

In SA, the age of onset for substance use was found to be 14.6 years (Moodley et al., 2012). This finding suggests that substance abuse prevention interventions should begin at a young age, at a time when individuals are most impressionable (Patton et al., 2014). Various forms of prevention interventions, such as traditional rehabilitation programs for substance abuse among adult populations have been developed and tested over time; and the effectiveness of psychosocial/behavioural

and environmental interventions approaches e.g. multiple session of cognitive–behavioural intervention, restrictive access to substances and paraphilia has been documented (see Bertrand et al., 2013; Fischer et al., 2015; Rudzinski et al., 2012). However, and more importantly, interventions for adults may not prove to be effective for young people (Toumbourou et al., 2007; United Nations Office on Drugs and Crime [UNODC], 2004).

There are many intervention strategies implemented to address substance abuse among young people, namely developmental strategies, harm reduction approaches, therapeutic communities and brief interventions (Toumbourou et al., 2007). Developmental strategies seek to reach individuals at different age groups or developmental phases and the most effective of developmental interventions are the ones that are delivered during early childhood with messages relaying the harms of substance use as well as the interventions aimed at capacitating young people to resist social influences of initiating substance use (Toumbourou et al., 2007). Harm reduction approaches specifically target risky patterns of substance abuse or the environments in which it occurs. These interventions seek to mitigate the harm caused by substances. When addressing substance use among young people, a combination of harm reduction strategies and early brief interventions are considered to be effective (Patton et al., 2014; Toumbourou et al., 2007). Therapeutic communities i.e. traditional residential rehabilitation programs are long-term approaches to provide skills and develop attitudes that help substance abusing individuals make long term substance-free lifestyle changes (Jhanjee, 2014). Despite the intended outcomes of these approaches, the effectiveness is questionable and evidence to support the effectiveness is scarce. This may be explained by treatment drop out and patients who do not complete the programme (Jhanjee, 2014). Brief Interventions (BI) are effective intervention approaches for problematic substance use among young people (Jhanjee, 2014) due to the fact that young people who are at risk or abuse substances are identified quicker and interventions following the screening allow for behaviour modification (Toumbourou et al., 2007). Brief interventions work especially well for alcohol abuse and may be just as feasible for reducing young peoples' abuse of tobacco, cannabis and methamphetamine (Jhanjee, 2014; Martin, Copeland, & Swift, 2005).

Sports and Substance abuse

Participation in sport is beneficial to youth as it transmits social values (e.g. discipline and obeying rules) as well as prevent and mediate risk behaviours such as unhealthy diets, violence and substance use (Cavill, Kahlmeier, & Racioppi, 2006). There are other potential benefits for young people involved in sport including improved academic performance, increased self-esteem, as well as the ability to manage stress better (Holt & Neely, 2011). Youth involvement in sport has both positive and negative associations to substance use. Some researchers found that youth who are involved in sport programmes are more likely to use substances while others show that sport participation among youth serve as a protective factor for substance use (see Corte-Real, 2006; Mays & Thompson, 2009; Pauperio et al., 2012; Taliaferro et al., 2010). Mays and Thompson (2009) found that male athletes were more likely to report binge drinking and female athletes were less likely to report drinking than their nonathletic counterparts. This finding indicates that sports may be a protective factor for females and a risk factor for males. Findings from a systematic review conducted by Kwan, Bobko, Faulkner, Donnelly and Cairney (2014), suggest that team-based sports codes pose greater risks of substance use than individual-based sport codes. There are fewer studies that examined the association between individual-level sports codes and the substance use among young people. ,

Despite inconsistent findings, sport participation can play a crucial role in the positive development of youth (Holt & Neely, 2011; Weiss, Stuntz, Bhalla, Bolter, & Price, 2013). One of the many benefits of sport participation for youth is that it serves to prevent and control alcohol and other substance use (Pauperio et al., 2012). Sport may adequately serve as a platform and context for a selection of prevention and interventions focusing on substance use among young people. Sport has been utilized as an intervention strategy for substance abuse prevention. Kremer, Malki, and Benshoff (1995) found that physical activity, including sporting activities, has a direct bearing on the physical well-being of individuals who abuse substance in rehabilitation programmes. Sport can generate self-esteem among those known to be abusing substances which may not be possible through educational achievements or other forms of social support. Moreover, playing sports also 'builds

character' (Crabbe, 2000; Kirkcaldy, Shephard, & Siefen, 2002; Purdy & Taylor, 1983).

Given the evidence the inclusion of sport in substance abuse prevention programmes is recommended. In particular, extreme sports such as snowboarding, skateboarding, skydiving, and hand gliding may possibly be a better fit for substance abuse programmes based on the fact that those who engage in extreme sport share characteristics with individuals who abuse substances. These characteristics include, among others, sensation-seeking, risk taking, and escaping from boredom (Kerr & Mackenzie, 2002; Zuckerman, 1979). This study explored the use of skateboarding coaching combined with a life-skills workshop as an intervention strategy to address substance use and abuse among adolescence and young adults in three selected communities in the South Africa.

1.2. Study rationale and theoretical underpinnings

Various forms of interventions and traditional rehabilitation programs have been developed and tested over time, but the effectiveness of substance abuse programmes is not sustainable over time or inappropriate for the South African context (e.g. Harker et al, 2008). In SA, the age of onset for substance abuse is 14.6 years (e.g. Moodley, Matjila & Moosa, 2012). This suggests that substance abuse prevention interventions should begin at a young age, at a time when individuals are most impressionable. Since innovation lies at the "heart" of young people, a creative strategy is required to prevent young people from experimenting with, and progressing on to abuse licit and illicit drugs. Young individuals who abuse substances represent a particular sub-culture, and any attempt at substance abuse reduction has to appeal to the mind-set of this sub-culture. There are many parallels that can be drawn between individuals who abuse substances and individuals who engage in extreme sport. A few of these commonalities include: risk-taking, sensation-seeking and a desire to be challenged and engage in challenging activities (Brymer, 2010; Escobar-Chaves & Anderson, 2008; Flisher, Townsend & Chikobvu, 2010; Willig, 2008).

Skateboarding was the preferred extreme sport for this study given that it requires relatively fewer resources as compared to other forms of extreme sport such as skydiving or kayaking to set up. In addition, skateboarding appears to attract

adolescents and young adults, which is ideal because this is the targeted age group for this study. The intervention proposed may perhaps be considered to be an unconventional one, but in order to push the boundaries of science; scientists sometimes have to develop an intervention or programme that can be a potential game-changer.

This study, therefore, proposes a novel approach to substance abuse reduction. The primary aim of this study is to explore the use of an extreme sport, namely skateboarding, for substance abuse reduction among young individuals in SA. The intention of conducting this study is to initiate a body of evidence for a non-traditional substance abuse intervention for youth and young adults.

1.3. Study aim and objectives

The aim of the study was to explore the use of sport, namely skateboarding, as a substance abuse reduction strategy among individuals between the ages of 12 and 24 years in three selected communities in South Africa. The specific objectives of the study were as follows:

1. To explore the perceptions of stakeholders of the factors associated with the onset of substance use and abuse.
2. To explore the perceptions of stakeholders of the use of sport, in particular, skateboarding, as a substance abuse intervention for youth and young adults.
3. To determine the extent of substance abuse and the baseline measures of depressive and anxiety symptoms among adolescents and young adults during the pre- intervention phase.
4. To explore youth and young adults' perceptions of the factors associated with the onset of their substance use and abuse.
5. To explore the perceptions of youth and young adults of the use of sport, in particular, skateboarding, as a substance abuse intervention for their targeted age group.

6. To implement a skateboarding intervention and life-skills workshop for adolescents and young adults who are found to be at risk or abusing substances.
7. To explore the perceived benefits of the skateboarding and life skills intervention workshop at the post-intervention phase.

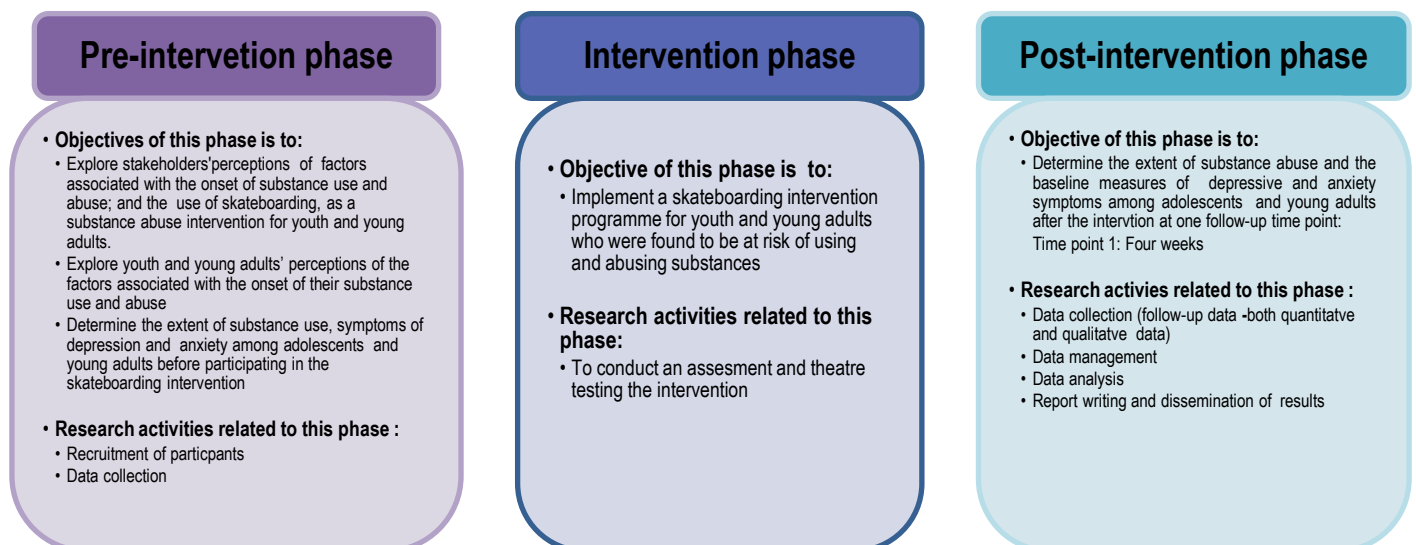
2. METHODS

2.1. Study design

A qualitative dominant mixed methods research approach (Johnson, Onwuegbuzie, & Turner, 2007) was employed to gain an in-depth understanding of the use of an extreme sport, such as skateboarding, as an intervention strategy for young individuals who were identified as being at risk of using or abusing substances. The qualitative component comprised of FGDs, group interviews, and individual semi-structured interview data collection methods. The primary objectives of the qualitative component were to explore the participants' understanding of the reasons that contribute to substance use and abuse among adolescents and young adults, to highlight potential solutions to help address and reduce substance use and abuse, and their views of using skateboarding as an intervention strategy to help address substance use among youth. The quantitative component elicited demographic information by means of a questionnaire and obtained psychological characteristics of the participants by means of psychological screening tools which will be discussed later in this section.

The study was conducted in three phases, namely: pre-intervention, intervention, and post-intervention. The activities related to each of the three phases are described in this section. A diagrammatic presentation of these phases is presented on Figure 1.

Figure 1. The three phases of the project



2.2. Population and sampling

Prior to the study loveLife employed a situational analysis and identified three communities with particular high substance abuse prevalence rates. The target communities were Roodepan, Kimberly in the Northern Cape Province, Wentworth, Durban in KwaZulu-Natal, and Eldorado Park in Gauteng. Males and females between the ages of 12 and 24 years were recruited through local schools and social networking strategies. A screening tool, Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) Version 3.0 was used to identify individuals at risk of or using substances.

The recruitment and selection of the various study participants are discussed next. This include individuals between the ages of 12 and 24 years who were identified to be at risk of using or abusing substances (target group), individuals involved with skateboarding, as well as Key Informants.

Participant recruitment

- **Target group: Adolescents and young adults at risk of using or abusing substances**

Individuals between the ages 12 and 17 years were primarily recruited from schools. The research team contacted various schools in the selected communities telephonically to arrange meetings with the school principals to present the research concept and get their buy-in to assist the researchers with the recruitment process by allowing access to learners in the targeted age categories. Once the principals agreed the researchers scheduled appropriate times and venues at the schools to present the research to learners. They explained the details of the screening process as well as the eligibility to take part in the FGDs and intervention phases. The interested learners were provided with an information sheet and assent form to present to their parents or guardians. Due to the Children's Act requirements all prospective participants under the age of 18 years required a signed assent form from a parent or legal guardian in addition to their consent. Educators and principals assisted with the collection of the signed permission forms and helped to arrange appropriate times and venues to screen those learners who wanted to participate in the study.

Social networking strategies were mainly applied to recruit individuals in the 18 to 24 year category as most of these individuals were out of school. Liaison with key community representatives was instrumental in gaining access to potential participants. Some participants in this category were also recruited via schools.

(a) Gauteng: Eldorado Park

The researchers approached two primary schools and three secondary schools for the requirement of participants aged 12 to 17 years. The research team liaised with the Chairperson of the Local Drug Action Committee (LDAC) and visionary of a local Non-Profit Organization (NPO) who agreed to assist with the recruitment of young adults between the ages of 18 and 24 year who abused substances.

(b) KwaZulu-Natal: Wentworth

The researchers liaised with the Regional Games Coordinator for loveLife at the provincial office who assisted with the community entry process by introducing the research team to the Programmes Coordinator and community worker who worked closely with loveLife and the local schools. The community worker assisted the researchers to gain access to schools by arranging meetings with principals and/or deputy principals who either delegated the tasks or personally arranged for the researchers to talk to the learners.

(c) Northern Cape: Roodepan

The researchers were acquainted with the Chairperson of the LDAC and requested his assistance to arrange a meeting with community representatives including community workers from Social Development, Community Based Organisations (CBOs) and Non-Governmental Organisations (NGOs) such as KeMoja, Ikhaya Lethu as well as Sports and Recreation Adventure. The Regional Games Officer from the Northern Cape loveLife Provincial Office helped the researchers gain access to potential participants in the 18 to 24 year age category. The LDAC Chairperson assisted with scheduling appointments with school principals at two primary schools and one secondary school to present the research concept. The principals delegated the facilitation of accessing learners to the deputy principal or other educators. A community representative and the Games Officer accompanied

the researchers when they recruited adolescents and young adults who were not in school.

- **Key Informants**

- (a) Community Representatives***

Community Representatives comprised managers of NGOs, police officers, nurses and health professionals. The community contact persons were instrumental in introducing the researchers to these participants. In all three provinces the researchers were not familiar with community organisations in the area and relied on the Chairperson of the Local Drug Action Committee. The researchers were introduced to several community representatives upon their arrival in the respective communities by a semi-formal meeting that was coordinated by the community workers and the LDAC Chairperson. These meetings consequently eased the recruitment process of Key Informants who were presented with the research concept and invited to participate in individual semi-structured interviews.

- (b) Principals and Educators***

The researchers approached either principals or educators and invited them to participate in individual semi-structured interviews based on their interaction with the learners. For example, at one of the schools an educator was the coordinator of an anti-substance abuse program and his participation in this study was thus more relevant than that of the principal.

- (c) Parents or Legal Guardians***

Parents or guardians of those participants found to be at risk of using or abusing substances were contacted telephonically and invited to participate in individual semi-structured interviews after explaining the nature and purpose of the interviews.

- (d) Skateboarding adolescents and young adults***

The researchers included this group of participants in the study, to understand the skateboarding as a sport from the perspective of youth. The researchers recruited participants in the Western Cape, Cape Town as the sport is common among youth in this vicinity. A skateboarding CBO assisted with the recruitment of young people

who were involved skateboarding, contact details were provided of clients aged 12 to 24 years. Telephonic contact was made with the parents to introduce the study and to request their assent. The research team also visited a skateboarding park in Cape Town Central to recruit potential participants. The ages for these individuals ranged from 19 to 21 years. Once again, telephonic contact was made to confirm participation and establish availability.

The recruitment of the 12 to 17 year olds was facilitated by the programme coordinator at one of the Youth centres in Cape Town as well as skateboarding coach who implements a skateboarding programme for youth. With regard to the 18 to 24 year old group, the researchers visited a skate park, in the city centre in Cape Town several times to obtain contact details of potential participants.

2.3. Data collection

The qualitative data collection included the use of Key Informant Interviews (KIs) and FGDs. The Quantitative data collection tools included: (a) the World Health Organization Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) Version 3.0 to assess the extent of substance use among the target group (Onifade & Bello, 2014; WHO ASSIST Working Group, 2002); (b) APA Severity Measure for Depression—Adult for the 18 to 24 year old age group (Johnson, Harris, Spitzer, & Williams, 2002); (c) APA Severity Measure for Depression—Child for the Age group 12–17 years old (Cameron, Crawford, Lawton, & Reid, 2008); (d) APA LEVEL 2—Anxiety—Adult, PROMIS Emotional Distress—Anxiety— Short Form (Cella et al., 2010; Schalet et al., 2016); and (e) Severity Measure for Generalized Anxiety Disorder—Child Age 11–17 (Craske et al., 2013).

Pre-Intervention Phase

Data collection and Procedure

The data collection occurred immediately after the community entry and recruitment phase. For each category of participants, namely Key Informants and Target Group Participants, a description of the data collection process is explained below. The table hereunder (Table 1) depicts the number of Individual Interviews and Focus Group Discussion (FDGs) conducted with Key Informants.

Table 1. Number of Individual Interviews and FGDs for Key stakeholders

Participant type:	Number of Individual Interviews
Community representatives	10
Principals /Educators	6
Parents/ Guardians	5
Participant type:	Number of Focus Groups
Skateboarders (12-17 years)	1
Skateboarders (18-24 years)	1

1. Key Informants

(a) Individual Interviews: Community representatives

The research team scheduled Individual Interviews with representatives from Gauteng, KwaZulu-Natal and Northern Cape. In KwaZulu-Natal and the Northern Cape a total of 5 KII interviews were conducted in each province respectively. In total, 10 Individual Interviews with various community representatives were conducted in the three provinces. The community representatives were interviewed at their work place or at the local loveLife offices in the areas. The Gauteng interviews could not take place, due to the unavailability of the selected community representative.

(b) Individual Interviews: Principals and Educators

In Gauteng, one Individual Interview was conducted with a primary school principal. In KwaZulu-Natal two educators were interviewed. In the Northern Cape we interviewed the acting deputy principal at a primary school. An interview was conducted with the Life Skills educator who was involved in an existing substance abuse screening programme at the school following difficulties with contacting the school principal. In total five Individual Interviews were conducted with school *Principals and Educators* in the three provinces. The interviews took place at the schools.

(c) Individual Interviews: Parents or Legal Guardians

In Gauteng, two Individual Interviews were conducted with parents or legal guardians of youth in the target age group (between the ages of 12-24 years who did not

participate in the study). Both interviewees had experience and valuable information regarding youth substance use and abuse as they worked as security officers at one of the local secondary schools. In KwaZulu-Natal and the Northern Cape parents or legal guardians of children who were found to be using or abusing substances were contacted telephonically and invited to take part in an individual interview. In the Northern Cape the researchers scheduled a total of six Individual Interviews with parents or legal guardians but managed to conduct three in total. Two parents wanted to reschedule the appointments; the reasons for rescheduling included arising commitments and not having the energy to participate. One parent declined, after receiving informed consent. In total five individual interviews with parents were conducted in the three provinces.

(d) Focus Group Discussions (FDGs): Skateboarding adolescents and young adults

After recruiting eligible participants via a skateboarding coach, the programme coordinator and from personal interactions at a skate park in Cape Town CBD, the researchers conducted two group interviews with skateboarders between the ages of 12 and 24 years, one with 12 to 17 year olds and another with 18 to 24 year olds. They were requested to complete the ASSIST screening tool, demographics form, as well as depression and anxiety screening measures before taking part in the group interview.

2. Target Group Participants

(a) Focus Group Discussions (FDGs): Adolescents and Young Adults

Once the adolescents and young adults were screened and identified to be using or abusing substances they were invited to be part of a Focus Group Discussion (FGD). On the day of the group discussions, assent or consent for participation in the group discussion was obtained. Thereafter, the participants completed a demographic profile and screening measures for anxiety and depressive symptoms. In each of the provinces the initial plan was to conduct a total of two FGDs. One group consisted of participants between the ages of 12 and 17 year and another group with participants between the ages of 18 and 24 years. With regard to adolescents, one group was conducted in Gauteng and one in KwaZulu-Natal, while three were

conducted in the Northern Cape. One group per province was conducted with the young adults (18-24 years).

With regard to the participants between the ages of 12 and 17 years, those who returned the parental consent forms were immediately included in the groups, given that they wanted to participate on the day. In Gauteng, two FGDs (n=12) were conducted with seven participants in the 12 to 17 year old group, and five in the 18 to 24 year old category. In KwaZulu-Natal (n=17), the groups comprised nine participants in the 12 to 17 year old group and eight participants in the 18 to 24 year old category. In the Northern Cape (n=25), a total of 21 participants were included in the 12 to 17 year old group (which comprised three separate FGDs), and four in the 18 to 24 year old category.

For the 12-17 year olds the groups were conducted after school in a prearranged and enclosed venue on the school premises such as a staff room or hall. On average the groups lasted for approximately 38-45 minutes each. The participants were from different schools and few of the participants were transported by the researchers to the venue. Their parents were requested to sign indemnity forms for them to be taken off the school premises. After the group discussion learners were dropped off at the school, their homes or at the taxi or bus stop.

With regard to the young adults (18-24 years), a total of three FGDs were conducted (one in each of the three provinces). Two of the groups were conducted at secondary schools as the groups constituted learners in the age category. A prearranged venue such as the library or staff room was arranged. The third group was conducted in a support group room at a NGO in the area. The groups lasted on average 40 minutes each.

Table 2 shows the total number of individuals screened for substance use and abuse, those who were not eligible, the total number of young people who were eligible for the intervention, as well as those who participated in the FGDs. Although fewer young people took part in the FGDs, there were more adolescents and young adults who screened positive for substance use and abuse who could be invited to take part in the skateboarding course.

Table 2. Target group: number of participants eligible for intervention

Site	Total number screened		Not Eligible (Screened -)		Eligible for intervention		Participated in FGD		Eligible (Screened +) did not participate in FGD	
	12-17	18-24	12-17	18-24	12-17	18-24	12-17	18-24	12-17	18-24
Eldorado Park	25	7	7	0	18	7	7	5	11	2
Wentworth	17	9	6	0	11	9	9	8	2	1
Roodepan	71	4	32	0	39	6	21	6	18	0

Intervention

Preparatory activities were carried out for the intervention phase for each of the provinces by the skateboarding coaches to establish the viable venues and other logistical such as the venues and equipment for the intervention. An assessment was also made about the best time to conduct the intervention. Initial contact was made with most participants by calling or SMSing the participants or their parent/guardian. Educators were requested to inform learners in advance that the event would be taking place once the exams have ended. The educators also assisted with the distribution of indemnity and parental consent forms to the participants aged 12 to 17 years. In KwaZulu-Natal, in the instances where participants were absent, the educators ensured that the forms were delivered to the homes of participants for their parent/guardian. Due to the high absenteeism at schools in the Northern Cape, the forms were dropped off at the participants' homes by the games coordinator. The participants were also reminded of the event and logistic details via a phone call or SMS.

- ***Skateboard coaching component***

The intervention consisted of skateboard coaching and a life skills component that took place on the same day. The coaching comprised two 1-hour sessions of basic

skateboarding skills such as the stances on a skateboard (standing and pushing), balance (i.e. pushing and turning) as well as a few simple tricks (e.g. hippy jump and Ollie) braking on the skateboard. The skateboarding was implemented by skateboarding coaches. Skateboards were provided for the participants on the day. Thereafter, skateboards were left for storage at the school for the participants to use and practise skills.

- ***Love4Life challenge component***

The life skills component was implemented in the form of a game i.e. love4Life challenge (a health and wellness programme developed by loveLife). The programme uses a fun, board game approach, similar to Snakes and Ladders to educate young people on Sexual and Reproductive health issues, as well as general health and wellness information to help them navigate life and relationships better. Participants in the study completed two of the three components of the game which were namely; “wellness” and “self and future”. The third component of the game; ‘healthy sexuality’ did not form part of this research study. Participation in the game sparked lively discussions among the participants, providing the facilitators with opportunities to educate them on the identified topics.

Post Intervention Phase

The intervention was implemented with a group of adolescents in Gauteng (n=4). The post intervention follow-up data collection was conducted four weeks after the intervention took place. The substance abuse, depression and anxiety screening tools administered at baseline were re-administered at four weeks following the intervention (See section 2.3). The screening was followed by a FGD on participants’ experiences of the intervention. Table 3 shows the number of participants that were eligible for the intervention against those who were retained in the study. The table shows that a greater number was screened, of which not all participants were eligible to be part of the study as they were not found to be at risk or abusing substances. When invited to be part of the study, 7 participants volunteered to be part of the FGDs while only 4 participants were retained through-out the study. There were challenges retaining a larger number of participants. These challenges included the fact that some of the participants were not reachable via the telephone, others were not at the same school, while the rest were not interested in taking part in the study.

Table 3. Participation in intervention

Site	Total number screened	Total eligible for intervention	Pre-intervention FGD	Participated in intervention	Four week follow up
	12-17 years				
Eldorado Park	25	18	7	4	4

2.4. Study Ethics, Procedure and Data Management

The study received ethical approval from the HSRC Research Ethics Committee (8/18/02/15). The necessary permission to conduct research within schools was obtained from the respective provincial education departments (Gauteng, KwaZulu-Natal and Northern Cape). Approval from the Gauteng Department of Education was obtained on 15 May 2015, the Northern Cape Department of Education on 27 May 2015, and KwaZulu-Natal Department of Education on 10 June 2015.

After receiving permission from the provincial education departments, the researchers also obtained permission from the school principals to conduct research within their schools. Thereafter, meetings were scheduled with various gatekeepers in the community to assist with recruitment. The researchers also managed to inform adolescents and young adults in or out of school about the study, those who expressed interest were requested to provide their names for further correspondence. Written parental consent, assent and consent were obtained before the adolescents and young adults participated in the study. In all three provinces data were collected by two researchers, in English, Afrikaans and isiXhosa.

With regard to data management, the quantitative data were checked before it was captured directly into SPSS dataset spread sheets for analysis. The captured data were checked for accuracy and all queries were checked against the original questionnaires and adjusted accordingly. All the statistical procedures were verified between two researchers and discrepancies were checked and addressed. The data management for the qualitative data was that all individual interviews and FGDs were transcribed verbatim and translated into English. The transcripts were checked

for accuracy against the audio recordings; all discrepancies were corrected. The quality checked transcripts were used for the data analysis.

2.5. Data Analysis

Quantitative component

At baseline and four week follow-up, there were three measures used, namely the ASSIST and the APA screening tools for depression and anxiety. Please see methods section for the details of the tools and the interpretation of it. For the purposes of this study, only descriptive statistics were calculated. Means were calculated for the various socio-economic and psychological variables. The outcome of the statistics is presented in the results section.

Qualitative component

Thematic content analysis (Vaismoradi, Turunen, & Bondas, 2013) was utilized to analyse the qualitative individual interviews and the FGDs. The KIs were coded analysed manually by a team of researchers coding and defining themes. With regard to the FGDs, the data were analysed using Atlas.ti. A team of researchers once again coded the data and defined themes. There was a team of three researchers who checked the integrity of the data and cross-checked the themes assigned.

3. FINDINGS

3.1 Pre-intervention phase

3.1.a Baseline Data of the target groups: Demographic, ASSIST, Depression and Anxiety

The results show that the mean age for adolescent participants was 13.4 years; more than half reside in the Northern Cape (55.3%) and are Coloured males. In addition, fewer participants had their fathers living at home with them (48.6 %) as opposed to those who lived with their mother (62.2%). Table 4 presents the demographic and family characteristics which are variables of interest for the 12 to 17 year old participants.

Table 5 reflects the mean scores for the screening measures, namely, the ASSIST, APA –Depression tool, and the APA –Anxiety tool for the 12 to 17 year old participants. With regard to substance abuse, nearly three quarters were at risk or abusing alcohol (72.2%) and cannabis (72.2%) followed by 69.7% and 25.0% at risk or abusing tobacco and sedatives respectively. An equal number of participants reported none to slight depression (50.0%) and screened positive for Mild to Severe depression (50.0%). More than half (57.1%) of the participants screened positive for mild to severe anxiety.

Table 4. Demographic and family characteristics for adolescents aged 12-17 years

Age Category	Frequency	Mean age (years)
12-17 years	37	13.4
Province (N=38)	Frequency	(%)
Gauteng	8	21.1
KwaZulu-Natal	9	23.7
Northern Cape	21	55.3
Total	38	100.0
Gender (N=37)	Frequency	(%)
Male	24	64.9
Female	13	35.1
Total	37	100.0
Racial categories (N=36)	Frequency	(%)
Black	4	11.1
Coloured	31	86.1
Indian	1	2.8
Total	36	100.0
Education level (N=37)	Frequency	(%)
School	37	100.0
College	0.0	0.0
Out of school	0.0	0.0
Total	0.0	100.0
How many people do you live with at home? (N=37)	Frequency	(%)
< 10 people	35	94.6
> 10 people	2	5.4
Total	37	100.0
Does your father live with you?	Frequency	(%)
No	19	51.4
Yes	18	48.6
Total	37	100.0
Does your mother live at home? (N=37)	Frequency	(%)
No	14	37.8
Yes	23	62.2
Total	37	100.0
Do you have siblings that live at home?	Frequency	(%)
No	8	21.6
Yes	29	78.4
Total	37	100.0

Table 5. Frequency measures on the ASSIST, APA depression and APA anxiety screening for the target group of 12-17 year olds

ASSIST: No risk, At risk and substance abuse								
Substance	n	Mean	Minimum	Maximum	No risk	(%)	At risk / and abusing	(%)
Tobacco	33	11.8	0	31	10	30.3	23	69.7
Alcohol	36	15.5	0	35	10	27.8	26	72.2
Cannabis	36	4.61	0	31	10	27.8	26	72.2
Cocaine	36	1.92	0	31	30	83.3	6	16.7
Amphetamines	36	2.72	0	26	30	83.3	6	16.7
Inhalants	36	1.72	0	27	32	88.9	4	11.1
Sedatives	36	3.44	0	26	27	75.0	4	25.0
Hallucinogens	36	1.42	0	27	33	91.7	3	8.3
Opioids	36	2.44	0	33	31	86.1	5	13.9
Other	36	2.00	0	25	30	83.3	6	16.7
Depression								
APA_Depression Screening	n	Mean	Minimum	Maximum	None to slight	(%)	Mild to severe	(%)
	36	6.19	0	19	18	50.0	18	50.0
Anxiety								
APA_Anxiety Screening	n	Mean	Minimum	Maximum	None to slight	(%)	Mild to severe	(%)
	35	6.9714	0	23	15	42.9	20	57.1

The table below (Table 6) presents the demographic and family characteristics which are variables of interest for the 18-24 year old participants. The mean age of the young adults was 19.6 years, with most residing in KZN (42.1%), more males (84.2%) than females (15.8%) more Coloured participants (63.2%) as compared to other racial groups participated in the study. More than 3/4 are school attending youth (78.9%), of those who are not in school 75.5% were unemployed. A large number of the participants did not have their fathers living at home with them (78.9%), while fewer, 36.8% did not have their mothers living with them.

An overwhelming majority were found to be at risk or abusing tobacco (84.2%), followed by cannabis abuse (78.9%) and alcohol abuse (64.8%). With regard to the severity of depression and anxiety, 57.9% and 26.3% screened positive for mild to severe depression and anxiety, respectively. Table 7 reflects the mean scores for the screening measures, namely, the ASSIST, APA –Depression tool, and the APA – Anxiety tool for the 18-24 year old participants.

Table 6. Demographic and family characteristics for adolescents aged 18-24 year old participants

Age Categories (n=19)	Frequency	Mean age years)
18-24	19	19.6
Province (n=19)	Frequency	(%)
Gauteng	5	26.3
KwaZulu-Natal	8	42.1
Northern Cape	6	31.6
Total	19	100.0
Gender (n=19)	Frequency	(%)
Male	16	84.2
Female	3	15.8
Total	19	100.0
Racial categories (n=19)	Frequency	(%)
Black	6	31.6
Coloured	12	63.2
White	1	5.3
Total	19	100.0
Education level (n=19)	Frequency	(%)
School	15	78.9
College	2	10.5
Out of school	2	10.5
Total	19	100.0
Employment status (n=4)	Frequency	(%)
Looking for work	3	75.0
Employed	1	25.0
Total	4	100.0
How many people do you live with at home? (n=19)	Frequency	(%)
< 10 people	16	84.2
> 10 people	3	15.8
Total	19	100.0
Does your father live with you? (n=19)	Frequency	(%)
No	15	78.9
Yes	4	21.1
Total	19	100.0
Does your mother live at home? (n=19)	Frequency	(%)
No	7	36.8
Yes	12	63.2
Total	19	100.0
Do you have siblings that live at home? (n=19)	Frequency	(%)
No	7	36.8
Yes	12	63.2
Total	19	100.0

Table 7. Frequency measures on the ASSIST, APA depression and anxiety screening measures for the target group of 18-24 year olds

ASSIST: No risk, At risk and substance abuse								
Substance	n	Mean	Minimum	Maximum	Frequency-No risk	(%)	Frequency -At risk /abusing	(%)
Tobacco	19	17.21	0	31	3	18.8	16	84.2
Alcohol	19	16.11	0	32	6	31.6	13	68.4
Cannabis	19	19.63	0	36	4	21.1	15	78.9
Cocaine	19	4.00	0	26	14	73.7	5	26.3
Amphetamines	19	2.58	0	27	16	84.2	3	15.8
Inhalants	19	2.89	0	30	17	89.5	2	10.5
Sedatives	19	0.00	0	0	19	100		
Hallucinogens	19	0.68	0	11	18	94.7	1	5.3
Opioids	19	1.63	0	22	17	89.5	2	10.5
Other	18	2.89	0	26	16	88.9	2	11.9
Depression								
APA_Depression Screening	n	Mean	Minimum	Maximum	Frequency-None to slight	(%)	Frequency-Mild to severe	(%)
	19	8.00	1	22	8	42.1	11	57.9
Anxiety								
APA_Anxiety Screening	n	Mean	Minimum	Maximum	Frequency-None to slight	(%)	Frequency-Mild to severe	(%)
	19	14.79	7	29	14	73.7	5	26.3

3.1.b Pre-intervention: Individual Interviews with the key informants and FGDs with the target groups

A total of 35 Key informants were part of the study, with an equal amount of Principals/ Educators (n=6) and Community Representatives (n=6). The mean age for the Principals/ Educators was 48 years, Community Representatives was 39.7 years, Parents or Guardians was 42.6 years and the Skateboarders was 15.2 years. With regard to gender, 66.7 % of Principals/ Educators, 50.0% of Community Representatives, 40.0% of Parents or Guardians, and 88.9% of Skateboarding youth were males respectively. The table below (Table 8) reflects the characteristics of the key stakeholders, namely, the principals/ educators, community representatives, parents/ guardians and skateboarders.

Table 8. Demographic characteristics of the key stakeholders

Breakdown of Key Informants				
Category	n	Frequency	(%)	
Principals and Educators	6	6	17.1	
Community Representatives	6	6	17.1	
Parents or Guardians	5	5	14.3	
Skateboarders	18	18	51.4	
Total	35	35	100.00	
Age of participants by category				
Category of participants	n	Minimum	Maximum	Mean
Principals and Educators	6	36	62	48
Community Representatives	6	34	51	39.7
Parents or Guardians	5	36	51	42.6
Skateboarders	16	11	25	15.25
Total	17	34	62	43.4
Sex of participants by category				
Category of participants		Frequency	(%)	
Principals and Educators	Male	4	66.7	
	Female	2	33.3	
	Total	6	100.0	
Community Representatives	Male	3	50	
	Female	3	50	
	Total	6	100.0	
Parents or Guardians	Male	2	40	
	Female	3	60	
	Total	5	100.0	
Skateboarders	Male	16	88.9	
	Female	2	11.1	
	Total	18	100.0	

Key Informant Individual Interviews

The findings revealed that the key informants perceived that the factors influencing and sustaining substance abuse among young individuals were multi-factorial. The following themes emerged from the individual interviews:

- (1) Individual-level factors contributing to the initiation and maintenance of substance abuse**
- (2) The influence of family environment on substance abuse**

(3) Community level factors influencing substance abuse

(4) Recommendations for prevention and harm reduction programmes

Theme 1: Individual-level factors contributing to the initiation and maintenance of substance abuse

At an individual level, factors included ineffective coping strategies, low self-esteem, stressful life events, using substances as a form of “medication” to cope with stressful life events, “experimentation”, and the desire to have the glamorous lifestyle of those involved in the illicit drug trade.

One of the Community Representatives, in the Northern Cape elucidated how young people typically think “I have no use, I don’t mean anything to anybody, and I must just mess my life up”. Other quotations from the various stakeholders demonstrate individual-level factors that influence and sustain substance abuse among young individuals:

Principal/Educator_KZN: Maybe something traumatic happened in their life that lead to them taking drugs. I’m talking from a personal experience where we have family members that are addicted to drugs like sugars and heroin and he started at the age of 13. And his excuse along the way is Oh because what happened in his family, his father passed away

Principal/Educator_KZN: It could be a coping mechanism, but also, there’s peer pressure as well. Because there’s a lot of kids who use drugs on a social level, especially when they go out. Ecstasy is a drug where, which is used at the clubs. And think they are using it casually. I don’t think they are doing it on a daily basis. But as they continue using it, then they become addicted.

Parent/Guardian_GP: Because our youngsters just think to get money—even the ladies, the girls, “I have to go sleep... to get money”. They well—you will see, I’m telling you, 13, 14 years—at night time. I can take you to a Lolly Lounge, what you will find? Young, beautiful girls using drugs! Why?! To tell you straight, eh, “That guy give me something to feel like I’m-I’m alive”. What is it? Drugs! And then, he sleeps with you.

Theme 2: The influence of family environment on substance abuse

The family environments were perceived to be characterised by family dysfunction, poor resources, unemployed parents and those parents who abused substances. Stakeholder perceptions regarding family environments that play a role in substance abuse were as follows:

Principal/Educator_NC: It is the social circumstances at home, most of our learners depend upon the SASSA grant. And most of them grow up with grandparents or

guardians because parents abandon them. Some of them have single mothers. Some of their fathers aren't there. Some of their mothers or fathers and grandparents have passed on.

Principal/Educator_KZN: I won't call it genetic... like you know children are also very easily influenced by their parents and by what their parents do and you know it result to them following in their parents footsteps, seeing all along what their parents are doing, you know abusing alcohol and drugs and eventually they leading that same path.

Community Rep_KZN: They, they can't buy food. They, they can't pay their lights. Granny only got this pension. The mother's left the children with the granny. So here's a granny struggling and this guy comes he say okay you know what, pays granny's lights, pays this for granny as long as you keep –I mean where an 84 granny arrested for keeping drugs you know. And when you look at her situation, she got six children in her home that she needs to send to school. She needs to clothe – she needs to do all these things for because the mother has run away. Her daughters have left these children and gone their way and left granny, so granny was keeping the drugs and then granny got caught. So you see its poverty.

Parent/Guardian_NC: Some parents probably fight in front of the children...And argues and all those things. It is that type of things of reapproachment that a child decides, no. I'll just do it. And I will do it. Nobody is going to tell me not, for my father and mother them; they do not care for me

Theme 3: Community level factors influencing substance abuse

At the community level, there was peer pressure to experiment with illicit substances in particular, normalization of substance use, and a lack of recreational facilities to create an enabling environment for young people to take up opportunities. Community level factors perceived to be influencing substance abuse were expressed as follows:

Parent/Guardian_NC: Through a circle of friends. Friends say, no man come let's go and do the thing. You will feel for yourself, how you would feel afterwards. [Northern Cape 2]

Community Rep_KZN: Uhm...People don't see the problem with it. People don't see the problem with it!

Community Rep_KZN: The lack of other activities you know if, if I can go deeper into what I'm saying is you got a youngster who stays in the community, if there's structured activity, most probably he'll get into it whether it's sports, whether it's recreation uhm...you know, arts, drama. I'm sure he'll get into it but because this looks attractive to them you know, you come out of your house, you've get people that are smoking drugs not too far away. It looks exciting this is what you grew up with. This is the only excitement. So I would think that is why they drift to that you know that uhm...that activity because it looks attractive.

Theme 4: Recommendations for prevention and harm reduction programmes

The key stakeholders suggested that prevention and harm reduction programmes need to be school, family and community based with multi-sectoral initiatives.

Community Rep_KZN: I feel if we could strengthen sport, all sorts of sports where our children have this type of energy that they can engaged.

Community Rep_KZN: But I think that the parents are important because we do – he or she is going back home, and a brilliant programme with the youngsters, but if it's not enforced at home, all what we've done is undone. So, I would like to see – whatever projects we bring to the community there should – be an aspect of informing and educating the parent directly not indirectly, directly you know. If we are interviewing a youngster we are trying to take the youngster out the challenges that he or she is in, we should also work with the parent as well because that's important.

Principal/Educator_KZN: We need whole communities to hold hands to fight this battle. For example here in Wentworth I think there are 50 to 100 NGOs, but each NGO has its own agenda. Even though drug addiction is a universal fight, each organisation will have its own way of fighting it, but we need them.

Principal/Educator_NC: Discipline is one of the main benefits. With a specific sporting code you need to have discipline, and from code to code it varies. You're required to do this or required to do that. And with practice I think it helps you manage your time. It educates you and it helps with your physical appearance and with the specific sporting codes. They will tell you what the advantages of being involved in that. And a good coach will also inform you or educate you about the different substance and what it does to your body if you are not involved in or if you are involved in sport.

Principal/Educator_NC_: I don't think skateboard is that expensive. It's very economical is every cheap. To get a skateboard is not that difficult. Another sporting code rugby soccer you need to have attire boots socks and those kinds of things to must participate in a team you can play in a team. You can't play soccer on your own you can't play rugby on your own. Skateboarding, if your friends are not there you are on your own. For an individual it is very nice, as for the other codes you must participate in a team.

Key Informant FGDs

The common primary themes that emerged from the FGDs conducted among a group of 12 to 17 year old and a group of 18 to 24 year old skateboarders are as follows: Influence of peers and exposure to the sport on initiating the up-take of skateboarding; The personality of skateboarders; The physical and psychosocial benefits of skateboarding; Lack of facilities for skateboarding; The potential of skateboarding to reduce substance abuse among young individuals; and Recommendations for community-based activities for young individuals.

In the younger age group, namely 12 to 17 year olds, the following quotations illustrate the various themes that emerged from participants in the 12 to 17 year old group:

Theme 1: Influence of peers and exposure to the sport on initiating the up-take of skateboarding

Participant: When I first started in 2013 my friend's father had bought it for him and when he arrived from town my friend brought it out immediately so I asked for a ride, I would fall at first but in the end I learned as he also taught me [Skateboarder, Cape Town].

Participant: I saw my friends being really awesome at it and I wanted to be like them [Skateboarder, Cape Town].

Theme 2: Skateboarding has physical and psychosocial benefits

Participant: They could ask their mothers to buy them skating boards and then we could show them and also tell them the rules. They must also be level headed [Skateboarder, Cape Town].

Participant: Me? Yes I enjoyed the skateboard I also wanted to learn some skills so if they say there is a program to teach us I'd try and I wouldn't give up [Skateboarder, Cape Town].

Participant: You can be a professional [Skateboarder, Cape Town].

Theme 3: Lack of facilities for skateboarding

Participant: There is no one teaching me, I'm just riding on my own. [Skateboarder, Cape Town]

Participant: It's just a bridge.

Theme 4: Skateboarding has the potential to reduce substance abuse among young individuals

Participant: They could ask their mothers to buy them skating boards and then we could show them and also tell them the rules. They must also be level headed [Skateboarder, Cape Town].

Participant: I'd tell them to practise it (skateboarding) because if they don't they'll end up smoking [Skateboarder, Cape Town].

Participant: They would stop smoking because smoking kills their lungs, they rot [Skateboarder, Cape Town].

Theme 5: Recommendations for community-based activities for young individuals.

Participant: Showing them how to skate...to stop drugs [Skateboarder, Cape Town].

Participant: Speak to them; speak to them the right way [Skateboarder, Cape Town].

In the older age group, namely 18-24 year olds, the following quotations illustrate the various themes that emerged:

Theme 1: Initiation of skateboarding influenced by exposure to the sport and peer influence

Participant: I had my friend like I never thought about skating. My friend at school like told me that we have like a community centre like and my friend told me that there is something going on like skateboarding going on like, yah. Got like interested in it. I never skated before; it was like I don't know how to say it but yah [Skateboarder, Cape Town].

Participant: I started surfing I lived on the West Coast and one of my friends got him a skateboard I was pretty curious to try it, it is similar concept to surfing pretty much kicked off about 7 years ago. I moved into town. So with sharks and stuff in water this side skate boarding took preference over surfing [Skateboarder, Cape Town].

Theme 2: The personality of skateboarders

Participant: The group of skateboarders in the community and in school don't judge you, everybody is very accepting. It's like a similar mind-set like skateboarders—you automatically just gonna get along, it's very cool [Skateboarder, Cape Town].

Participant: They're mostly loners, if you're a loner, I always see myself as a loner. I have been attracted to skateboarding. I was always being controlled at some part or having to conform in my own way I can have fun alone with my board. I even have more fun with my friends around; I don't have to do anything in order to belong to a certain people. Most skateboarders become groups but they're individuals before like mainly you're an individual and a loner and then you come part of this group of individuals. This is not just to conform by whoever says what. Although you gonna have fun with the group, you're not gonna force each other to do anything because you're a loner, you take your own decisions that I say that is how I—skateboarders are [Skateboarder, Cape Town].

Theme 3: The physical and psychosocial benefits of skateboarding

Participant: I also think skateboarding teaches someone pretty good discipline. It is not easy at first you have you keep going [Skateboarder, Cape Town].

Participant: It's like he said yes because I have been to Valhalla skate park and I've been to Scottsdale there has been incidents like never thought I will see literally 16, 17 year olds shooting at each other across the skate park so I think skateboarding would like there is more positive aspects you can make a living out of skateboarding if you persevere and keep doing what you do every day. So I think like it can be good for you [Skateboarder, Cape Town].

Participant: Pretty good exercise I was an experience trial runner in the past. It is fine –you meet people –I got friends I would die for nowadays, it's for the skating. Everybody is just connecting; everybody has a certain mindset –like everybody just want to have fun there is no real conflict like skateboarding between people is like regular life for whatever the reason is [Skateboarder, Cape Town].

Theme 4: Lack of facilities for skateboarding

Participant: So is sport in South Africa there is not enough backing, facilities are scares, events are scares. No one is really focusing or enough money or budgeting for these things. A lot of people are not as aware of as we would be of what really goes on, it's not promoted like you said [Skateboarder, Cape Town].

Participant: The government should throw more money into something like that. Look for example at America, like the guys the same like me the competitions are insane, like there are huge sponsors—are large amount of money [Skateboarder, Cape Town].

Theme 5: Skateboarding has the potential to reduce substance abuse among young individuals

Participant: Yah I think that it like it's mostly that. Like I said, skateboarding is addictive. So it's just another addiction, one addiction replacing another addiction. Once into skateboarding they will be hooked into skateboarding and there is no time for anything else. I use to drink before skateboarding. If the weather is good I would go and skateboard. I use to drink like once a month but I did not decide I am not drinking anymore; I just don't have the time. I just wanted to skate. I think it will be a good thing for them [Skateboarder, Cape Town].

Participant: Yah, you have stories, I also have stories. They kind of clash. You can't combine alcohol and skateboarding. If you try you know it's gonna be a mess. Somebody is gonna mess up and someone is gonna get injured. So those are the second things. That is the one thing, there is another thing. Say if I drink—you know skateboarding is physical—if someone had to learn to skate hey, would say is this another world they would cruse, go down the street to a park or a skateboard. What we do is we cruse for an hour or hours to get to a skate park or at least an hour to get to Valhalla park or to get wherever or to the train station to town and then go to gardens and then we skate that place and that is physical, so if I might have drank the night before you know you would sweat a lot [Skateboarder, Cape Town].

Theme 6: Recommendations for community-based activities for young individuals.

Participant: To give some more people the opportunity as myself like sitting at home like thinking of things like there is so many things that can be done. People can just create something. Like you can say filming like photo like things like that could be yah that could take people further like to make like being motivated by the others like taking photos together and having fun together yah [Skateboarder, Cape Town].

Participant: Teach people skills like agricultural skills and all that kind of stuff. People should learn stuff like that. It's another thing that is currently failing. People have no tangible skills. But if you teach kids how to do simple stuff they might end up taking it seriously [Skateboarder, Cape Town].

Participant: Skill programmes I will say [Skateboarder, Cape Town].

In summary both skateboarding groups are positive about the benefits of skateboarding for young individuals. In particular, they definitely perceive that the benefits of engaging in skateboarding include substance abuse reduction.

Target Group FGDs: Adolescents (12 to 17 year olds)

The skateboarding intervention was intended for this target group of young individuals who were at risk for abusing substances or who met the criteria for substance abuse at the baseline measure. A FGD was conducted to ascertain the nature of the first exposure to licit or illicit substances, the factors that influenced the substance abuse, participants' perception of resources for young individuals in the community and their perception of the benefits of encouraging young individuals to engage in sport as one of the strategies for substance abuse reduction. In particular, we wanted to ascertain whether participants perceived that skateboarding, as a sport, would be an effective intervention for substance use or abuse reduction. The following themes emerged from the FGD with the 12-17 year olds:

- (1) Route to addiction: from experimentation to dependency**
- (2) Community level barriers to substance abuse harm reduction**
- (3) Family level barriers to reduce substance abuse**
- (4) Community level facilitators to promoting substance abuse harm reduction**
- (5) Drugs as a coping tool for life stressors, to manage low self-esteem and family dysfunction**
- (6) Perceived benefits of skateboarding**
- (7) Recommendations for substance abuse reduction**

Theme 1: Route to addiction: from experimentation to dependency

Participant: If they used drugs once then they feel the nice feeling then they want to carry on [Northern Cape].

Participant: It feels nice Miss, they get the—when they first try it, the first feeling feels nice and that's why they go on and on and on and on. [KwaZulu-Natal]

Participant: If-if they start from small they can't—they can't leave the drugs because it's already in their system— [Gauteng].

Participant: I walked with friends and they all smoke "n gwaai" (colloquial term for cigarette), I never smoked a "gwaai" yet but that day I told my friends let me try. So that is how I started. I took the "gwaai" and started smoking. And that was 2013,

December 24, I will never forget, I took on a “gwaai”. To this day I still do it with my friends [Northern Cape].

Theme 2: Community level barriers to substance abuse harm reduction

Participant: It is very easy because they sell the drugs in the community. Like there is another uncle between those two streets that sell pills and dagga. So it's in the community where they sell it [Northern Cape].

Participant: The policemen are also in this-in this thing, but they're trying to get drugs out but they bring it again in [Gauteng]

Participant: When you report that there's somebody's selling drugs in your area Miss—Miss the people that sell drugs Miss they have money, and when the cops want to come and arrest them they'll bribe them with money [KwaZulu-Natal].

Theme 3: Family level barriers to reduce substance abuse

Participant: Then he tells: “Yes, but it's then nice”. Then I ask him: “What is so nice in drinking?”. Although I also drank, I'm not going to argue. I sat and drank with my father since the age of 4. Then I realised, when I got older, I'm not going to anymore. I'm rather going to turn my life around because I go after drinking anymore and then I don't get to my schoolwork [Northern Cape].

Participant: Some parents allow it [KwaZulu-Natal].

Participant: Now and then if you stay by your step mother or father they will force you to smoke if you don't want to smoke they will threaten you that they will kill you or they will put something in the food. My friend experienced this [Northern Cape].

Participant: There are conflicts between the—both parties—your parents, your mother and your father and then—you just put yourself in that picture that, why did I come to this earth to come and fight—their conflicts and-and then you just wish that you're dead [KwaZulu-Natal].

Theme 4: Community level facilitators to promoting substance abuse harm reduction

Participant: Maybe we can go speak to the social workers. Maybe that way you will realise that drugs aren't right for teenagers to use [Northern Cape].

Participant: When you people have a friend that is good then they keep your thoughts by your schoolwork and off drugs [Northern Cape].

Participant: By the school it is athletics, rugby that also keep the learner away from drugs [Northern Cape].

Theme 5: Drugs as a coping tool to cope with life stressors, to manage low self-esteem and family dysfunction

Participant: I started smoking, cigarettes miss when-when my mother and my father passed away [KwaZulu-Natal].

Participant: They leave school miss and then they—their parents kick them out miss and then they live on the streets and start smoking whoonga 'cause it's the cheapest drug they can smoke [KwaZulu-Natal].

Participant: Or they have troubles at home... And then they go and use drugs and stuff, like [Gauteng].

Participant: There are two brothers and the mother likes only the one because he plays good sport then the other one feels he is not loved. Then he goes and do drugs [Northern Cape].

Participant: Sometimes if your family is on drugs and they don't have money they become frustrated and then they hit you [Northern Cape]

Theme 6: Perceived benefits of skateboarding

Participant: It is like that madam, when you come to a sport then you feel that there is a new group of people that you don't know. Here is your group. No then we say come let's go to that new people then we will greet and ask them how they are. And if we see the other youngsters that don't want to go, they again feel that they don't want to be with that people because they feel that that people want to be better – that's the other reason [Northern Cape].

Participant: So that you can forget what you are doing...To stay out of trouble [Northern Cape].

Participant: Then the children will concentrate on skateboarding and they'll stay out of the street and stay away from drugs [Gauteng].

Participant: Skateboarding is just like their lives, they must keep their lives in balance [Gauteng].

Theme 7: Recommendations for substance abuse reduction

Participant: Youngsters must get involved with loveLife to stay away from drugs [Northern Cape].

Participant: I think their friends they can help them [Northern Cape].

Participant: A park where it is safe. Where people don't drink and do drugs [Northern Cape].

Participant: Education, they must have health education [Gauteng].

Participant: I think from my community miss-miss they can sell it to anyone miss. And I think if there was a like, age restriction miss—because like, if you are like, uhm—miss, the people that uhm—that take drugs, they started from a young age and then they get addicted to it miss. Miss, so if uhm, they weren't allowed to sell it to young people miss I don't think there would be hooked on it as much as they are [KwaZulu-Natal].

Participant: Maybe we can go speak to the social workers. Maybe that way you will realise that drugs aren't right for teenagers to use [Northern Cape].

Participant: They can also help out in a coffee shop on Saturdays and Sundays to keep them away from drugs [Northern Cape].

Participant: When you people have a friend that is good then they keep your thoughts by your schoolwork and off drugs [Northern Cape].

This young target group who met the criteria for substance abuse or being at risk for substance abuse demonstrated a fairly insightful understanding of the complexity of substance abuse onset and the difficulty in reducing substance use and abuse. Selected quotations from the participants are presented to illustrate each of the themes.

Target Group FGDs: Young adults (18 to 24 year olds)

The following themes emerged from the FGD with the 18-24 year olds:

- (1) Consequences of substance abuse is at the individual and family levels**
- (2) Gender differences in substance abuse**
- (3) Knowledge of licit and illicit substances**
- (4) Route to addiction: from experimentation to dependency and the “cool factor”**
- (5) Drugs as a coping tool to cope with stressors, to manage low self-esteem and family dysfunction**
- (6) Normalization of substance abuse at family and community levels**
- (7) Peer pressure**
- (8) Perceived community-level barriers for a healthy life-style**
- (9) Perceived benefits of skateboarding**
- (10) Recommendations for substance abuse reduction**

These themes illustrate the complexity of substance abuse among young individuals and highlight the facilitators and barriers to this target group leading a healthy life-style. Selected quotations from the participants are presented to demonstrate how the themes emerged.

Theme 1: Consequences of substance abuse is at the individual and family levels

Participant: Once they hit high school they are looking in a different direct maybe they see like they see my bra is a drug dealer, if I can't become a soccer player, and then I might as well make money. That's how I ended up, because I was good at sports but I ended up mixing with the wrong crowd and the party life and in town it's the fast life. And I always looked up to people that I'm not supposed to and that's how I ended up selling the drugs and eventually started losing it—not completely. I managed to take control [KwaZulu-Natal].

Participant: I started realizing by what drugs was doing—I saw it with my friends and it hurt me 'cause—friends I never saw in years and then I see them that and the point

that they are in their lives. Yoh, it really hurt me 'cause that it made me like look in the mirror, I must look at myself and where am what I have lost and it hurt me—that's why I realized enough is enough—time to move forward now [Gauteng].

Theme 2: Gender differences in substance abuse

Participant: Lots of girls nowadays are sniffing coke, uhm you'll find that uhm [KwaZulu-Natal]

Participant: As far as boys are concerned, it is zol, ecstasy, I tried coke. And also rock it's a hard form of coke. [KwaZulu-Natal]

Theme 3: Knowledge of licit and illicit substances

Participant: Young children from eight come and buy cigarettes and then they stand and smoke it at the shop [KwaZulu-Natal].

Participant: Yes and then you get tik. They have that energy level, they don't get tired, they are used to it [Gauteng].

Theme 4: Route to addiction: from experimentation to dependency and the “cool factor”

Participant: To experience what it does to you and to have fun. [KwaZulu-Natal]

Participant: For fun then they get addicted [KwaZulu-Natal]

Participant: They see it from the elders, elder guys it looks maybe cool to them, they wanting to fit in, or something like that [Gauteng].

Theme 5: Drugs as a coping tool for life stressors, to manage low self-esteem and family dysfunction

Participant: Also the environment, there can maybe be problems at home—poverty. So they use drugs [Gauteng].

Participant: You can sometimes feel like an outsider in your own home and feel that you're not loved enough compared to your sister. Or you always compare yourself to your sister, or your parents compare yourself to your sister. “Your sister is better than you, she's cleverer than you—she's this and that—doesn't go out. Why are you like this?” So end up being stressed and you're like this. Since I'm not good enough, why not find something that will distract me so that I don't feel like an outsider and I don't feel any pain of the words they're saying. Whenever you come home just don't you need to listen to what they have to say [KwaZulu-Natal].

Theme 6: Normalization of substance abuse at family and community levels

Participant: It's more among the youth, more than the adults—because it's like a fashion if I must say [KwaZulu-Natal].

Participant: If the parent is doing it, it should be right so the child should obviously be doing it as well [KwaZulu-Natal].

Theme 7: Peer pressure

Participant: Maybe bad influence, friends put you on a trip and once it has you it has you. They say it's the first time they have you, it's not gonna to let you go [Gauteng].

Participant: Peer pressure it's when you see your group of friends is smoking and then they say, "Try this" and you say, "No, I don't want to" [KwaZulu-Natal]

Theme 8: Perceived community-level barriers for a healthy life-style

Participant: There are no sports in schools at all! The problem starts in high school. In primary school you're just having fun and then... In high school they keep them big. You get in that boots that's too big for you [KwaZulu-Natal].

Participant: I just want to say that it is very easily—easy to get and—so nothing is stopping you to try [Gauteng].

Theme 9: Perceived benefits of skateboarding

Participant: Skateboarding is interesting If you get someone like a professional skateboarder and show them how good they can be [KwaZulu-Natal]

Participant: It could also be interesting because it is not a common sport so people would just try it out because it's not a common sport [KwaZulu-Natal]

Theme 10: Recommendations for substance abuse reduction

Participant: But you know what they can do to like do steer children is to like get the right direction is they need to promote like sports. But there is like no one to really fund all those type of things. Like soccer, you know? Say now you have a dream that you would like to follow but now if there's no one funding those types of programmes they're not gonna look in that direction [KwaZulu-Natal].

Participant: Yes, like song and dancing, speech and drama [KwaZulu-Natal].

Participant: Whatever you bring and it is not interesting they will just go back to what they're doing before. It has to be interesting, has to be educational and gain something out of it—benefit out of it [Gauteng].

3.2. Post-Intervention measures and Focus Group Discussions

Screening measures

Once the skateboarding coaching and the life orientation intervention package was implemented, the post intervention measures were conducted 4-weeks later. The measures at baseline, namely the ASSIST, and the APA screening tools for depression and anxiety, were taken again at the post-intervention time point (four weeks). Table 9 below provides the demographic characteristics of the target group participants at the post-intervention. The mean age of the group (n=4) was 12.5

years, the group consisted of more females (75.0%) than males (25.0%), with 75.0% were Coloured and 25.0% was Indian. The participants were in-school youth.

In Table 10 below, the substance abuse, depression and anxiety screening measures are presented for both the before and after the intervention. After the intervention, fewer participants reported being at risk or abusing substance especially for tobacco (75.0% vs. 100.0%); cocaine (0.0% vs. 50.0%); amphetamines (0.0% vs. 25.0%); sedatives (25.0% vs. 50.0%) and other (0% vs. 50.0%). However, being at risk or abusing alcohol (75.0%) and cannabis (50.0%) remained the same before and after the intervention. Similarly depression and anxiety also remained constant at 50.0% and 75.0% before and after the intervention.

Table 9. Participant Characteristics of the Target Groups aged 12 to 17 years

Age Category (n=4)	Frequency	Mean age
12-17 years	4	12.5
Province (n=4)	Frequency	%
Gauteng	4	100
Gender (n=4)	Frequency	%
Male	1	25.0
Female	3	75.0
Total	4	100
Racial categories (n=4)	Frequency	%
Coloured	3	75.0
Indian	1	25.0
Total	4	100
Education level (n=4)	Frequency	%
School	4	100
Total	0	100

Table 10. Pre and Post Intervention screening measures frequencies of the 12 to 17 year old target group

Pre-Intervention									Post-Intervention								
At risk or abusing substances									At risk or abusing substances								
Substance	n	Mean	Minimum	Maximum	No risk	(%)	At risk /abusing	(%)	Substance	n	Mean	Minimum	Maximum	No risk	(%)	At risk /abusing	(%)
Tobacco	4	14.25	6	27	0	0	4	100	Tobacco	4	12	0	23	1	25	3	75
Alcohol	4	15.00	0	24	1	25	3	75	Alcohol	4	18.00	0	28	1	25	3	75
Cannabis	4	8.75	0	29	2	50	2	50	Cannabis	4	14.50	0	33	2	50	2	50
Cocaine	4	9.25	0	31	2	50	2	50	Cocaine	4	0.00	0	0	4	100	0	0
Amphetamines	4	6.50	0	26	3	75	1	25	Amphetamines	4	0.00	0	0	4	100	0	0
Inhalants	4	6,75	0	27	3	75	1	25	Inhalants	4	4.00	0	16	3	75	1	25
Sedatives	4	7.25	0	19	2	50	2	50	Sedatives	4	5.75	0	23	3	75	1	25
Hallucinogens	4	6.75	0	27	3	75	1	25	Hallucinogens	4	0.00	0	0	4	100	0	0
Opioids	4	7.75	0	31	3	75	1	25	Opioids	4	5.50	0	22	3	75	1	25
Other	4	8.00	0	25	2	50	2	50	Other	4	0.00	0	0	4	100	0	0
Depression									Depression								
APA_Depression Screening	n	Mean	Minimum	Maximum	None to slight	(%)	Mild to severe	(%)	APA_Depression Screening	n	Mean	Minimum	Maximum	None to slight	(%)	Mild to severe	(%)
	4	11.75	8	19	2	50	2	50		4	11.25	6	16	2	50	2	50
Anxiety									Anxiety								
APA_Anxiety Screening	n	Mean	Minimum	Maximum	None to slight	(%)	Mild to severe	(%)	APA_Anxiety Screening	n	Mean	Minimum	Maximum	None to slight	(%)	Mild to severe	(%)
	4	17.25	10	22	1	25.0	3	75.0		4	16.00	10	19	1	25.0	3	75.0

Focus Group Discussions

Please refer to the section on Methods for the details regarding the Intervention Package used in this exploratory study. The themes that emerged from this FGD were centred around the two components of the intervention, namely the benefits and limitations of the skateboarding intervention and the life-orientation programme for substance abuse reduction. The themes are as follows: (1) Agreeing to participate: hoping for a positive outcome; (2) The “excitement” factor; (3) The “value” factor: inspirational, encourages perseverance and overcoming challenges, and influences attitudinal change; and (4) Barrier to success: insufficient number of skateboards.

Each of the themes will be presented with the relevant quotations from participants.

Theme 1: Agreeing to participate: hoping for a positive outcome

Participant: I wanted to be part of the study because I wanted to stop using substance [Gauteng].

Participant: And just to come and learn more things about how to, um, respect my body [Gauteng].

Participant: Because I thought it was also very fun to do and it keeps [sic] busy [Gauteng].

Theme 2: The “excitement” factor

Participant: At first when they came, it was—I was afraid of getting the skateboard. I fell and then I got it in—afterwards. It was very fun to skateboard [Gauteng].

Participant: I think my best part was when I fell. –Because I was shocked. Sometimes I love being shocked. –It makes me feel excited [Gauteng].

Theme 3: The “value” factor: inspirational, encourages perseverance and overcoming challenges, and influences attitudinal change

Participant: It inspired me a lot because I learned I can learn a lot from skateboard [sic] [Gauteng]..

Participant: I tried things that they taught me, and after I tried it I got it right, but I tried it on, and on, and on, and when I got it perfectly right I knew that I could do that trick [Gauteng].

Participant: And they told us, um, if we fall we must get up and—like, we must—we must never, never give up [Gauteng].

Participant: And I learned that you mustn't give up on your body, you must stay a healthy—live—and you mustn't use alcohol during—when you're in school or any time [Gauteng].

Participant: Uhm, I think after skateboarding I changed my attitude. [Pause] P4: Yah, my changed my attitude, 'cause normally when my granny use to tell me wash dishes I was like, “No why must I wash dishes? I'm not the only one in the house” [Gauteng].

Theme 4: Barrier to success: insufficient number of skateboards

Participant: I had too much homework. And I have to go to church [Gauteng].

Participant: I wasn't going to concentrate on my work at school [Gauteng].

Participant: The reason why I didn't—I skate after skateboarding at school, 'cause I don't have a skateboard. And I was not normally allowed to go outside; because my granny's scared they might steal me [Gauteng].

4. DISCUSSION

This study aimed to explore the use of sport, namely skateboarding, as a substance abuse reduction strategy among individuals between the ages of 12 and 24 years in three selected communities within South Africa. In addition it sought to explore the perceptions of stakeholders (Community Representatives, Parents/Guardians, Principals/Educators, youth who use substances, and youth who practice skateboarding) of substance abuse and skateboarding as a plausible intervention strategy for reducing substance use among adolescents and young adults. The research highlighted that the factors that contribute to the initiation and maintenance of substance abuse are centred three levels namely Individual; Family and interpersonal and Community or structural. In addition, it depicted the value of the skateboarding coaching sessions that was implemented.

The findings for the Individual Interviews with Key Stakeholders was found to be consistent with previous literature regarding the individual risk factors for the initiation of substances such as ineffective coping strategies for managing daily stressors or stressful life events (Stone, Becker, Huber, & Catalano, 2012); experimentation and leisure use that leads to dependence/addiction (Barker & Taylor, 2014; Leshner, n.d.; Roberts, 2015); self-esteem issues or internalising behaviours (Razali & Kliewer, 2015) and glamorising/idealising the substance abusing lifestyle.

An overarching theme emanating from the study speaks to the influence of family, specifically parents, on the initiation and maintenance of young people's abuse of substance. Furthermore, a particular emphasis was placed on the implications of the psychosocial features and socio-economic characteristics of families' e.g. and family dysfunction (parental discord, parental substance abuse, and weak parent-child attachment), family structure, as well as poor resources stemming from unemployment and poverty. There is substantial body of evidence that support the notion that familial environment factors influence the abuse of substance in adolescents and young adults (Alhyas et al., 2015; Gilligan & Kypri, 2012; Jacob, MacArthur, Hickman, & Campbell, 2015; Stone et al., 2012; Sutherland, 2012).

Key Stakeholders discussed the community level factors that influence young people's initiation and maintenance of substance abuse including peer pressure; favourable attitudes and the normalisation of substance abuse behaviours in the homes and communities at large; as well as the availability, affordability and accessibility of licit and illicit substances. These findings are similar to other research studies conducted globally and in South Africa (Alhyas et al., 2015; Hayman, 2013; Knibbe et al., 2005).The findings also point to a multi-layered amalgamation of

individual, familial and neighbourhood or community level risk factors for substance use initiation among adolescents and young adults in these three communities.

The findings pertaining to young skateboarders highlighted the perception that adolescents and young adults are impressionable and that their peers exert a substantial amount of influence or motivation with regard to the types of and preferences for behaviours and activities that young people become involved in; be it taking up a sport such as skateboarding or using and abusing substances (Joesaar, Hein, & Hagger, 2011, 2012; Orunaboka & Deemua, 2011). Skateboarding was also associated with specific personality types such as introverts who do not conform to groups. As an extension of their discussion, participants alluded to common personality traits such as risk-taking and sensation seeking that underpins the behaviour of both skateboarders and individuals who abuse substances. international literature concur with the finding i.e. skateboarding as an extreme form of sport has been found to be linked to individuals who desire to be challenged or seek sensation (Brymer, 2010; Escobar-Chaves & Anderson, 2008) Further, an important finding, that is corroborated in literature (Hendricks, Savahl, & Florence, 2015; Wegner, 2011) is that the lack of recreational activities for both adolescents and young adults may lead to boredom that indirectly influences the abuse of substances. The lack of recreational facilities in general were discussed as to be a barrier for young people being involved in substances as there are few alternatives to keep them occupied during their leisure time. In South Africa the lack of recreational facilities is a common factor contributing to the abuse of substances for young people (Ramlagan, Peltzer, & Matseke, 2010). The findings indicate that although there is potential for skateboarding to permeate into many communities in South Africa, yet the lack of skating facilities within communities impedes the growth of the sport.

With regard to the target group (pre-intervention), the quantitative results for substance abuse screening show that the most frequently abused substances by adolescents are alcohol, cannabis and tobacco. This finding is not uncommon in the country as researchers such as Moodley et al. (2012) found that a considerable amount of adolescents in their study reported lifetime prevalence of alcohol among; and Dada et al. (2014) who confirms a pattern of increasing cannabis use in certain areas such as Gauteng and KwaZulu-Natal. For the older age group category, tobacco, cannabis and then alcohol was found to be the most frequently abuse substances. This finding may suggest that some young people have progressed beyond the point abusing using one substance to abusing two simultaneously (i.e. tobacco and cannabis) to using both tobacco and cannabis. In support of this finding, Hindocha et al. (2015) also highlight the poly-substance abuse in particular tobacco and cannabis. The use of tobacco, alcohol and

cannabis may also point greater access to these substances due to poor enforcement of laws prohibiting the possession and use of these substances (Hamdulay & Mash, 2011).

The majority of participants, in both age categories presented with mild to severe symptoms of depression and anxiety. This may suggest the co-occurrence of substance abuse and internalising behaviour or the development of psychological disorders as presented previously in research (Perle et al., 2013). The relationship between substance abuse and depression and anxiety are known to follow two path ways. The first pathways is the existence of substance abuse disorder may result in the development depression and anxiety also known as common mental disorders (CMDs) (Scalco et al., 2014). The second pathway is that the existence of depression and anxiety may further predispose individuals to the development of substance abuse disorders (Scalco et al., 2014). In a similar pattern to that of the 12-17 year olds i.e. the vulnerability of young adults who may develop a co-morbidity of substance abuse and depression or anxiety. More importantly, more young adults in the study reported mild to severe symptoms of depression as opposed to symptoms of anxiety. The findings speak to the need to early and continuous screening for depression and anxiety in particular, among adolescents and young adults who abuse substances as they may be particularly vulnerable to have a comorbidity of the two, for example Santisteban et al.(2015); Pang et al. (2014); Wu et al. (2010) show the co-existence of the substance abuse and mood disorders

The qualitative findings indicate that the route to progression is a key individual level risk factor for substance abuse among adolescents and young adults. Experimentation of substances almost exclusively occurred in the context of peer groups. Once individuals experiment with substances socially, they end up using the substances more habitually and this resulting in dependence and addiction. This finding was emphasised in most groups.

The participants discussed their perceived familial and community level factors that impeded the reduction substance abuse. With regard to family factors, parental substance abuse maintains substance abuse due to the favourable attitudes about substance abuse being transferred from parents onto their children. This implies that there is a need for family based interventions to as part of a holistic approach to reduce substance abuse (Hamdulay & Mash, 2011). In addition, it becomes evident that the family environment may enable young people to abuse substances. In this study the parent-child attachment and home environment were found to be strong contributors to the daily stressors, young people experience these stressors and want to escape from it, employ ineffective coping mechanisms such as substance abuse to be able to do so. Hence, the link between ineffective coping strategies and substance abuse are confirmed in this

study. This strengthens the notion of including psycho-educational interventions that focus effective coping strategies for adolescents

The findings show that young people are aware of the drug dealing that occurs in their communities. As such, the accessibility and availability of substances constituted a major community-level barrier to addressing substance reduction among young people, a finding similar to other studies that focused on substance abuse among youth (Hamdulay & Mash, 2011; Knibbe et al., 2005). Adolescents explained that drug dealing /trafficking of illegal substances is perceived to be a lucrative form of income in these communities. In these communities where poverty and unemployment are rife, a career in drug dealing may be perceived to be acceptable and normalised. This finding suggests that drug dealing makes substances even more readily available for young people to use.

The quantitative results show that the means scores for all substance, besides alcohol and cannabis, decreased after the intervention. In addition the mean scores for symptoms of depression and anxiety were also lower than before the intervention. However, it is important to mention that these results be interpreted with caution due to the small sample size

The findings show that young people were eager to be involved in the skateboarding and life skills component of the study because they attributed much value and advantages to it. Participants also discussed their motivations for participating in the study which included reducing their substance abuse, becoming healthier and skateboarding being an exciting leisure activity. A highlight of the intervention was that it enabled participants to exude the quality of perseverance and which allowed them to overcome challenges. In addition, other perceived benefits of skateboarding were primarily centred on psychosocial and physical aspects of development including the platform to meet new social groups, the promotion of a holistic sense of well-being and striking balance in life as well as enjoyment of the sport. Therefore, skateboarding was found to be no different to other sports that offer a variety of benefits e.g. develop secure attachment with others; build character; establish emotional and behavioural well-being for adolescents and young adults as evidenced in previous research by (Eime, Young, Harvey, Charity, & Payne, 2013; United Nations Office for Drug Control and Crime Prevention, 2002). More importantly, with relation to young people abusing substances, skateboarding could offer an alternative sporting code that could appeal to the curiosity of young people. The findings from the study further explain that a skateboarding and life skills programme may be an important in providing creative, psycho-educational, and developmentally appropriate

outpatient substance abuse reduction strategies as recommended by researchers such as Becker and Curry (2008); United Nations Office for Drug Control and Crime Prevention (2002).

5. CONCLUSION AND RECOMMENDATIONS

The benefits of combining a skateboarding and a life-skills intervention to reduce the use and abuse of substances for adolescents and young adults have been demonstrated in this study. An important finding, however, was that cannabis and alcohol were the two substances that did not show a reduction in use following the intervention although all the other substances measured did.

Skateboarding combined with a life-skills intervention shows promise for reducing the use and abuse of the following substances: tobacco, cocaine, amphetamines, sedatives and hallucinogens. Another important finding was that the participants in this study remained at risk for developing common mental disorders (CMDs) as they were found to test positive for depression and anxiety at the pre-and -post intervention time points.

While the study demonstrates these findings presented it is important to point highlight limitations of the study, namely: the small sample size, duration of skateboarding and life-skills intervention both of these may influence the results. It is therefore recommended that further interventions be implemented on a longer time frame. In addition, a concerted effort should be made by the project team to recruit larger numbers and retain participants.

It is recommended that adolescents and young adults abusing alcohol and cannabis with a co-existing potential for developing a CMD (i.e. those who test positive for symptoms of depression and anxiety) are provided facility-based care. They also need to be closely monitored at follow-up and post-discharge. Additionally, it is recommended that a private partnership is entered into with loveLife to provide skateboards to young individuals in the affected communities who will benefit from taking up the sport to facilitate the reduction in substance abuse.

Further recommendations include:

- The design and implementation of family and community-based interventions in the study target communities;
- An escalation of recreational and leisure activities in these communities;
- The restoration of existing recreational facilities as well as the development youth friendly recreational facilities; and
- Collaborations between local authorities, the Departments of Sport and Recreation, and Social Development for the installation of skateboarding facilities in underserved communities.

- Routine screening for substance abuse within school settings.
- To provide a platform to learners that facilitates participation in various sports codes

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APPENDICES

APPENDIX 1: KEY INFORMANT INTERVIEW GUIDES

USING SPORT AS AN INTERVENTION FOR SUBSTANCE USE REDUCTION AMONG ADOLESCENTS AND YOUNG ADULTS IN THREE SELECTED COMMUNITIES IN SOUTH AFRICA

Key Informant Interview Guide: Community representatives

- 1) Please tell me about substance use and abuse among young people (12-24 years old) in the community.
- 2) To your knowledge, what are the reasons that young people start using and abusing substances?
- 3) What factors contribute to young people continuing to use or abuse substances?
- 4) What programmes exist in the school or community to address substance use and abuse among young people?
- 5) Do you believe that if young people play a sport they are less likely to engage in substance use and abuse?
- 6) What type of sport would you recommend?
- 7) Are you familiar with skateboarding as a sport?
- 8) What do you think about using skateboarding as a way to stop or reduce substance use or abuse among young people?
- 9) Can you recommend other activities that young people can engage in that can help them stop or reduce substance use or abuse?

**USING SPORT AS AN INTERVENTION FOR SUBSTANCE USE REDUCTION AMONG
ADOLESCENTS AND YOUNG ADULTS IN THREE SELECTED COMMUNITIES IN SOUTH
AFRICA**

Key Informant Interview Guide: Principals & educators

- 1) Please tell me about substance use and abuse among young people (12-24 years old) in the community.
- 2) To your knowledge what are the reasons that young people start using and abusing substances?
- 3) What factors contribute to young people continuing to use substances?
- 4) Is the use and abuse of substances a problem in your school, especially among scholars?
- 5) What procedures do you follow when you discover that a pupil at your school is using and /or abusing substances?
- 6) What programmes exist in the school or community to address substance use and abuse among scholars?
- 7) Do you believe that if young people play a sport they are less likely to engage in substance use and abuse?
- 8) What type of sport would you recommend?
- 9) Have you heard about skateboarding as a sport?
- 10) What do you think about using skateboarding as a way to stop or reduce substance abuse among young people?
- 11) Can you recommend other activities that young people can engage in that can help them stop or reduce substance abuse?

**Using Sport as an Intervention for Substance use Reduction among Adolescents and
Young Adults in three selected communities in South Africa
Key Informant Interview Guide: Parents / legal guardians**

- 1) Please tell me about substance use and abuse among young people (12-24 years old) in your community.
- 2) To your knowledge what are the reasons that young people start using and abusing substances?
- 3) Please explain what you believe are the factors which contribute to young people continuing to use substances?
- 4) Are you aware of any programmes that exist in the school or community to address substance use and abuse among scholars or other people living in the community?
- 5) Do you believe that if young people play a sport they are less likely to engage in substance use and abuse?
- 6) Is there a particular type of sport that you would recommend?
- 7) Are you familiar with skateboarding as a sport?
- 8) Please tell me what do you think about using skateboarding as way to prevent or reduce substance abuse among young people?
- 9) Please tell me if you have other recommendations regarding activities that young people can engage in that can help them reduce substance abuse?

APPENDIX 2: KEY INFORMANT FOCUS GROUP DISCUSSION GUIDES

Using Sport as an Intervention for Substance use Reduction among Adolescents and Young Adults in three selected communities in South Africa Key Informant FGD Guide: Skateboarding youth

- 1) Please tell us about how you came to be interested in skateboarding?
- 2) Please tell us about how you started and how much experience you now have in the sport?
- 3) Is there a skateboarding facility close to where you live?
- 4) Is skateboarding a hobby, or do you also take part in competitions?
- 5) What are the positive aspects of the sport?
- 6) What are the negative aspects of the sport?
- 7) Describe the type of people that you would recommend to take up the sport?
- 8) How do you think other young people can benefit from doing skateboarding?
- 9) What are your views on using skateboarding as a sport to help reduce substance use and abuse?
- 10) Is substance abuse a problem among young people in your community?
- 11) Are you aware of any programmes in your community, school or work-place that aims to reduce or stop substance use and abuse?
- 12) Do you have any other recommendations regarding activities that may possibly help to reduce or stop substance use and abuse among young people?

APPENDIX 3: TARGET GROUP FOCUS GROUP DISCUSSION GUIDE PRE-INTERVENTION

USING SPORT AS AN INTERVENTION FOR SUBSTANCE USE REDUCTION AMONG ADOLESCENTS AND YOUNG ADULTS IN THREE SELECTED COMMUNITIES IN SOUTH AFRICA

FGD Guide for Target Group: Pre-intervention

- 1) Please tell us about substance use among young people in the community. Tell us about what is commonly used, the age that young people start abusing and how they get introduced to it? Please give us any other information you feel is important.
- 2) What are the reasons that young people start using and abusing substances?
- 3) What factors contribute to young people continuing to using and abusing substances?
- 4) Are you aware of ways in which young people can try to stop or reduce substance abuse?
- 5) Are you aware of programmes available in the community to help young people reduce or stop abusing substances?
- 6) Are there sports programmes/activities for young people available in the community?
- 7) Do you think that young people playing sport can be an effective way of preventing them from using and abusing substances?
- 8) Have you heard about skateboarding?
- 9) What are your views on the idea of using skateboarding as a way of reducing or stopping substance use and abuse among young people your community?
- 10) Would you consider learning to skateboard?
- 11) Can you recommend other activities that might help young people reducing or stopping substance use and abuse among young people?

APPENDIX 4: TARGET GROUP FOCUS GROUP DISCUSSION GUIDE PRE-INTERVENTION

USING SPORT AS AN INTERVENTION FOR SUBSTANCE USE REDUCTION AMONG ADOLESCENTS AND YOUNG ADULTS IN THREE SELECTED COMMUNITIES IN SOUTH AFRICA

FGD Guide for Target Group: Post-intervention

We would like you to thank for your participation in this study, and want you to think of the skateboarding lessons you had a few weeks ago because we want to ask you some questions about your experiences:

- 1) Please tell us why you wanted to be a part of the skateboarding intervention.
- 2) What were your experiences of the day?
 - a. Can you tell us more about the day, what did you and how you find it?
 - b. What was the best part of the day?
 - c. What was the worst part of the day
- 3) What are some of the things that you learned?
 - a. Skateboarding tricks
 - b. Life skills
- 4) After the skateboarding session has anyone tried skateboarding and what was your experience?
- 5) We want you to think of your substance use since after the skateboarding and tell us about it.
 - a. Has it perhaps been any different and how?
- 6) Tell us about things that should be added or we could do in future interventions to help make it change young people substance abuse behaviors.