

RISK FACTORS FOR RELAPSE AMONG YOUNG AFRICAN ADULTS FOLLOWING IN-PATIENT TREATMENT FOR DRUG ABUSE IN THE GAUTENG PROVINCE

Ilze Swanepoel, Stephan Geyer, Gretel Crafford

More than 20% of admissions into treatment centres are re-admissions, with high incidences among young African adults in the Gauteng Province. Drug abuse and relapse have a negative impact on the achievement of social development goals in South Africa, and make serious demands on social work services. This study determined the risk factors for relapse among young African adults following in-patient treatment for drug abuse, specifically according to gender in order to propose localised and gender-specific treatment programmes and aftercare/reintegration services. A survey was undertaken with 44 respondents, who completed a group-administered questionnaire, at treatment centres across the Gauteng Province.

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INTRODUCTION AND PROBLEM STATEMENT

Internationally the relapse-rates following treatment are high. Relapse is “a breakdown ... in a person’s attempt to change or modify any target behaviour” (Marlatt & Donovan, 2005:ix). According to Adinoff, Talmadge, Williams, Schreffler, Jackley and Krebaum (2010:140), “relapse to substance abuse following treatment typically reaches 75% in the 3- to 6-month period following treatment.” Focusing on national data it is evident that relapse is also prevalent in South Africa following treatment for drug abuse. In this article “drugs” refers specifically to *illicit drugs* such as dagga, heroin, LSD, ecstasy, cocaine and methamphetamine (Benavie, 2009:8). Alcohol, nicotine and prescription medication are excluded. The South African Community Epidemiology Network on Drug Use (SACENDU) (2008) indicated that 24% of the intakes into treatment centres in the Gauteng Province, 22% in Cape Town, 20% in the Northern Region and 32% in Port Elizabeth are not first-time admissions. SACENDU (2014) furthermore found that in Gauteng Africans made up 60% of the total admissions from January to June 2013, showing an increase of 12% from SACENDU statistics in 2010. From these admissions young adults seem to be a vulnerable group with 23% of the individuals aged 20-24 years, 17% aged 25-29 years, 11% aged 30-34 years and 7% aged 35-39 years (SACENDU, 2014). Based on these statistics it becomes clear that young African adults in the Gauteng Province often present with relapse after initial treatment for drug abuse. For the purpose of this article an African refers to a South African citizen of Black South African descent, excluding Coloured and Asian people.

There seems to be a lack of research on the risk factors for relapse associated with drug abuse in the South African context. Previous domestic research in the Western Cape focused on exploring the experiences of chemically addicted adolescents regarding relapse after treatment (Van der Westhuizen, 2007) while Bain (2004) focused on the experience of relapse among cocaine and heroin users. However, the risk factors for relapse amongst young African adults (a person aged 18-39 years) following in-patient treatment for drug abuse in the Gauteng Province are largely unknown. This article made use of the definition in the Prevention of and Treatment for Substance Abuse Act 70 of 2008, which states that in-patient treatment is “residential treatment services provided at a treatment centre”.

Drug abuse and relapse have a negative impact on the achievement of social development goals in developing countries, such as South Africa, and make serious demands on social work service delivery (Geyer & Lombard, 2014:329-330; RSA, Ministry for Welfare and Population Development, 1997:81-83). Therefore, the authors were specifically interested in determining what environmental, inter- and intrapersonal

and physical risk factors precipitate relapse among young African adults in the Gauteng Province, specifically according to gender. By undertaking this study, it was possible to formulate guidelines and recommendations for treatment programmes and aftercare/reintegration services which are localised. This article aims to answer the following research question: *“What are the risk factors for relapse among young African adults following in-patient treatment for drug abuse in the Gauteng Province?”*

This article provides a brief literature review of the typical risk factors for relapse and the characteristics of young African adults. This survey will be followed by an exposition of the theoretical framework, namely the adaptation model. Then the research methods, research results and discussion will follow. The article culminates by drawing conclusions and making recommendations with specific reference to treatment centres on how to improve service delivery to young African adults and for providing effective aftercare/reintegration services to this vulnerable group.

LITERATURE REVIEW

The literature review focuses on the typical risk factors for relapse with reference to environmental, inter- and intra-personal and physical risk factors. The focus then shifts to the unique characteristics of young African adults.

Risk factors for relapse

Campos (2009:773) explains high-risk situations as those situations in which there is an increased desire to use, where the drug of choice may be readily available, or where social pressure to use drugs is increased. Other high-risk situations include particular environments, cognitive patterns, mood states or social situations. As derived from Marlatt’s Relapse Prevention Model (Marlatt & Witkiewitz, 2005:1), for a relapse to be prevented, high-risk situations, or risk factors, that precipitate a relapse need to be identified.

Environmental risk factors

Environmental risk factors that can increase the risk of relapse include increased availability and accessibility of drugs, poverty and unemployment, and encountering people, places and paraphernalia associated with earlier drug use.

Bain (2004:2) suggests that the prevalence of drug use by young people escalates as the variety of drugs available increases. Environmental cues play an important role in the process of relapse (Bain, 2004:29). Simply returning to the place where the drug(s) was taken can trigger a relapse even months after abstinence commenced (Bain, 2004:29). Cami and Farrè (2003:975) add that environmental stimuli associated with drug use itself can produce withdrawal and craving in the absence of the drug. For Hyman and Malenka (2001:697) environmental cues elevate the risk of a relapse when addicts encounter people, places or paraphernalia associated with earlier drug use.

Poverty and unemployment are also perceived as reasons for drug abuse (Ramlagan, Peltzer & Matseke, 2010:44). Employment opportunities are limited in South Africa and lack of education is also a contributing factor when employment is sought (National

Treasury, 2011:12). Seeing that employment opportunities are limited, becoming demotivated when employment is not found is a high-risk situation.

Interpersonal/social risk factors

“Interpersonal” relates to relationships or communication between people (Oxford Dictionary, 2012a). Campos (2009:773) states that individuals in recovery often have substance-using peer groups that model continued drug use, or do not possess the skills to help in managing high-risk situations. Depending on the influence from the peer group, relapse is probable upon returning to the same drug-abusing peers. Wadhwa (2009:777) includes peer pressure as one of the most frequent high-risk situations for relapse.

McCrary (2001:383) is of the opinion that deliberate steps need to be taken to detach drug-dependent people from a social network that is supportive of drug use and to access new social networks that support new behaviour. Doweiko (2006:399) postulates that the individual’s access to strong social support systems during times of craving seems to contribute to continued abstinence.

O’Connell and Bevvino (2007:53) think that during drug use conflict is dealt with in dysfunctional ways – the psychological consequences of conflict may have been muted and diluted by the presence of drugs in the system. Alternative healthy strategies and conflict-resolution styles need to be adopted by, amongst others, the young African adult in order to be able to deal with conflict constructively.

Intrapersonal risk factors

“Intrapersonal” refers to aspects that are taking place or existing within the mind (Oxford Dictionary, 2012b). Wadhwa (2009:777) postulates that some of the most frequent high-risk situations for relapse are when negative emotions are experienced. Such negative emotions include boredom, loneliness, sadness or depression, disappointment, anger, resentment and stress (Sinha, 2001:343; Wadhwa, 2009:777).

Drug users tend to use drugs to modify and change troublesome emotions and supplant them with at least temporary feelings of pleasure and happiness (O’Connell & Bevvino, 2007:67). Wadhwa (2009:778) affirms that the use of drugs is the central coping mechanism for day-to-day life for addicts, but it is necessary for individuals to identify specific coping mechanisms for different thoughts, feelings or moods, and situations. O’Connell and Bevvino (2007:33) believe that appropriate coping responses must be learned to cope with emotions and high-risk situations.

Doweiko (2006:399) states that a craving in itself is a poor predictor of relapse, which may be triggered by drug-use cues (smells, the sight of the drug, sounds, etc.) and trigger moods and memories that predispose the individual to substance use. Larimer, Palmer and Marlatt (1999:156) testify that on-going cravings may erode the person’s commitment to maintaining abstinence as the desire for immediate gratification increases. This process may lead to a relapse.

Physical risk factors

Physical risk factors that can increase the risk of relapse include physical dependence on drugs, withdrawal from drugs and being in a negative physical state. Physical dependence refers to the fact that the body has adapted physiologically to the chronic use of a drug(s) (Schuckit, 2006:9). Simultaneously, people also develop tolerance for the drug where they need higher doses to achieve the same effects (Schuckit, 2006:9). Withdrawal refers to the physiological and psychological symptoms that present when drug-taking is decreased or suddenly terminated (Kring, Davison, Neale & Johnson, 2007:297). Furthermore, Doweiko (2006:401) warns that a person experiencing a negative physical state such as illness, postsurgical distress or injury might face an elevated risk for relapse.

The debate now shifts to the characteristics of young African adults and how these characteristics relate to relapse among this vulnerable group.

Characteristics of young African adults

This study considered the young adult as an individual aged between 18 and 39 years (Sigelman & Rider, 2006:517; Tanner & Arnett, 2009:39). Urbanoski, Kelly, Hoepfner and Slaymaker (2011:1) posit that the developmental stage of young adulthood carries a notable risk of harmful use of drugs and the onset of substance use disorders. The characteristics unique to the young African adult that relate to relapse are highlighted.

Characteristics related to developmental transition

Certain characteristics of the transition into young adulthood give rise to drug abuse. Webster (2009:69) confirms that in the modern world young people face new risks and opportunities. The link between the family, school and work weakens as young people venture on their own journeys, many of which have uncertain outcomes. Measham, Parker and Aldridge (1998:9) add that concepts such as identity, sense of self, self-esteem, self-efficacy, social support, coping styles, isolation and meaning in life are all affected by rapidly changing political, social, cultural and moral climates, which possibly make young people more vulnerable to the damages inflicted by drug abuse.

This article argues that the typical characteristics which are deemed as important when considering the transition into adulthood among Africans include: social role changes, adolescent initiation, employment and change in social groups.

Social role changes

The characteristics of the transition into adulthood include certain developmental roles, which include changes in social roles (Newman & Newman, 2012:431). The salient roles of adulthood include those of worker, spouse/partner, friend and parent. Newman and Newman (2012:431) posit that these roles give structure to adult identity and meaning to life. Furthermore, Newman and Newman (2012:431) add that social class groups tend to agree on the appropriate age for significant life events such as marriage and child-rearing, and that this consensus exerts social pressure to play particular roles at expected ages. Konstam (2007:1) states that the transition into adulthood is a complex process during which youths who have been dependent on parents throughout childhood

start taking definitive steps to achieve a measure of financial, residential and emotional independence, and to take on more adult roles. These transitions pose risks to the young adult that might be dealt with ineffectively, such as abusing drugs. This view is supported by Velleman, Templeton and Copello (2005:99), who confirm that there is an increased risk of drug use associated with poor coping skills.

However, some young adults prolong the transition into adulthood and consequently the process of serious decision-making regarding their lives in the future (Roman, Human & Hiss, 2012:1164). In South Africa the majority of young adults live in the parental home, implying that there is still parental control and this places limitations on the individual's ability to achieve autonomy and develop decision-making skills (Roman *et al.*, 2012:1169).

Meintjies, Hall, Double-Hugh and Boulle (2010:40) maintain that there is a widespread concern that the number of children living without adults in child-headed households is rapidly increasing in South Africa. These children may consequently grow up without role models, and hence often lack social skills, a moral framework and discipline (Bray, 2003:6). Bray (2003:26) further thinks that orphans are found to exhibit internalised behaviour changes such as increased stress, trauma, anxiety, depression and low self-esteem – all of which might make them more vulnerable to drug abuse. There are intrapersonal risk factors for relapse associated with social role changes. These factors are mostly stress-related and are furthermore dependent on the young African adult's ability to adapt to changes and become independent.

Adolescent initiation

Some African cultures require certain initiation practices to take place in order to enter the stage of adulthood. A well-known cultural initiation practice is the circumcision of boys at initiation school. According to Marck (1997:357), there is a difference in risk behaviour between circumcised and uncircumcised males – some leave their traditional environments for wage labour in cities or at mines before they have reached an age to be circumcised, and some specifically leave for such employment to avoid circumcision. These males are faced with a whole different experience from their traditional environment and might be introduced to drugs without having appropriate knowledge regarding addictive chemicals. Circumcision could be considered an interpersonal or social risk factors for relapse seeing that this traditional ritual has some implied risks for drug abuse associated with it.

Employment

Central to acquiring independence during adulthood is finding employment. Konstam (2007:8) states that “the primary goal for young adults is to establish the ability to support themselves independent of their parents.” Newman and Newman (2012:457) postulate that work provides a major structural factor in the establishment of an individual's lifestyle and, furthermore, determines the activities, social relationships, challenges, satisfactions and hassles or frustrations of daily life. Opportunities for employment are limited in South Africa, especially for those less educated (StatsSA, 2015). The unemployment rate among youths (15-35 years) in South Africa is 36.9%

and 8.8% of Black African citizens are described as discouraged work-seekers. In the Gauteng Province the unemployment figure is above the national average at 39.8%, while 34.1% of youths in the province are not in employment, education or training (StatsSA, 2015). Overton-de Klerk and Oelofse (2010:399) maintain that unemployment is one of the reasons for the high incidence of drug abuse in communities, and in turn drug abuse aggravates high crime levels. Relapse could be triggered by unemployment as an environmental risk factor, especially after treatment when the young adult struggles to secure employment. Eventually not being able to find employment may lead to a lack of motivation and reduced commitment to abstinence.

Change in social groups

Nation and Heflinger (2006:418) indicate that of all the risk factors for drug abuse, the usage of drugs by friends was the only factor found to be significant across all age groups, gender and substances of abuse. As mentioned above, the peer group and functioning within the group become more prominent during young adulthood and thus might dominate decision-making with regard to drug experimentation or use. Social supports and social network norms not supportive of illicit drug use have been associated with both cessation and sustained abstinence. It can thus be indicated that by returning to the drug-abusing social group the young African adult is placing himself in an interpersonal/social high-risk situation.

Position of the young African adult within society and socio-economic status

Heinz (2009:5) states that the transitional arrangements for moving towards adulthood differ between societies according to their respective cultural traditions, education, employment and welfare system. This article focuses on young African adults. Not all young African adults are faced with issues such as poverty, violence, low socio-economic status, racism and discrimination. However, for those young African adults who are faced with some of these problems, Bennett and Olugbala (2010:179) declare that “poverty, residential mobility, and population density are important contributors to the social breakdown of many neighbourhoods and communities.” In addition, high population density makes the distribution of drugs even easier. A further challenge is the lack of infrastructure; Overton-de Klerk and Oelofse (2010:401) describe the lack of infrastructure as including the lack of constructive entertainment such as sport facilities, cinemas, libraries and community halls. Without constructive entertainment opportunities young African adults might become bored which is another high-risk situation for relapse. Other issues related to poor infrastructure are the lack of tertiary institutions and over-crowded classes (Overton-de Klerk & Oelofse, 2010:402). Furthermore, Brook, Brook and Pahl (2006:31) postulate that environmental factors, such as drug availability, volatile economic conditions, high crime rates and neighbourhood disorganisation, are all associated with drug use and abuse – all of which are often experienced by young African adults.

It can be summarised that unique challenges faced by young African adults predispose them to experiment with and continue the use of drugs. This argument is supported by Doweiko (2006:16), who points out that if something increases the individual’s sense of

pleasure or decreases discomfort, the person is most likely to repeat that behaviour. High-risk situations that might cause relapse among young African adults include unemployment, returning to drug-abusing social groups after treatment, access to and the availability of drugs, especially in high-density areas, and the lack of infrastructure, especially constructive entertainment in communities.

THEORETICAL FRAMEWORK

The adaptation model is a reliable framework from which a broad range of human phenomena and processes, the patterning of human behaviour and coping in health and illness, are studied (Dobratz, 2008:259). A person or a group of people can be seen as adaptive system(s) with internal processes for coping with change (Barone, Roy & Frederickson, 2011:353). The role of the environment is also acknowledged by this model. The environment signifies all the conditions, circumstances and influences that surround and affect the development and behaviour of people as adaptive systems (Barone *et al.*, 2011:354). Adaptation is defined by Sigelman and Rider (2006:173) as the process of adjusting to the demands of the environments. Seeing that drug dependence is considered to be a mental illness, as defined by the American Psychiatric Association's (2013) *Diagnostic and Statistical Manual of Mental Disorders* (DSM V), this model provides a foundation to consider drug abuse from this angle in the sense that people's behaviour and coping with regard to this disorder can be studied by applying the premises of this model.

The authors were interested in determining the risk factors for relapse among the respondents, be they internal or environmental, or a combination of both. The respondents were viewed as adaptive systems seeing that, *inter alia*, their environments had changed from their being in an in-patient treatment centre to being exposed to another environment outside the treatment centre (Dobratz, 2008:256). The authors are of the opinion that the respondents might have relapsed because they failed to adapt effectively to the environment outside the treatment centre. Attention was paid to the internal processes (i.e. interpersonal and physical health) of respondents and the role that their environments played in their relapsing.

RESEARCH METHODS

The quantitative research approach was adopted as this study intended to determine the risk factors for relapse among young African adults following in-patient treatment for drug abuse in the Gauteng Province (Fouché & Delpont, 2011:63). This study was applied in nature as the results gathered from this study could guide service delivery during treatment and aftercare/reintegration (Bless, Higson-Smith & Kagee, 2006:45). This study had an exploratory purpose as little is known (Fouché & De Vos, 2011:95) about the risk factors for relapse among young African adult males and females in the Gauteng Province. A survey was undertaken to collect data (Creswell, 2014:155-157).

Stratified random sampling, in combination with purposive sampling, was used to recruit respondents. Firstly, through stratified random sampling the population was divided into different strata (i.e. in-patient treatment centres) (Holt & Walker, 2009:38). In total four treatment centres, one in the Tshwane metropolis and three in the

Johannesburg metropolis, formed the strata. Both governmental and private treatment centres rendering in-patient treatment services to young African adults were included. Secondly, within the different strata, 44 (n=44) young African adults were recruited through purposive sampling (Botma, Greeff, Malaudzi & Wright, 2010:178). In total 35 male and 9 female respondents participated. The small sample can be attributed to the fact that the study was undertaken at the beginning of the year, but admissions at most treatment centres increase only from April onwards. Nonetheless, all respondents who qualified and agreed to participate in the study were included in the sample.

The respondents had to meet the following sampling criteria:

- Between the ages of 18 and 39, from both genders, addicted to illicit drugs;
- Have undergone in-patient treatment for 6-12 weeks;
- Have relapsed after having previous treatment during 2012 and 2013;
- Were at the time of the study re-admitted for treatment;
- Were English literate (at least Grade 4 education).

Data were collected through a group-administered questionnaire (Delpont & Roestenburg, 2011:171). The data-collection instrument was self-developed, based on the literature review and embedded in the adaptation model. The credibility of the data-collection instrument was ensured through face and content validity prior to data collection by obtaining the inputs from experts in the field of addiction and statistics (Babbie, 2007:146-147). The Cronbach alpha coefficient was calculated to confirm the reliability ($\alpha \geq 0.7$) of the questionnaire (Delpont & Roestenburg, 2011:177-178) and most of the sections of the data-collection instrument were reliable according to these norms.

The data were processed with the aid of the Department of Statistics at the University of Pretoria by using the Statistical Package for the Social Sciences, Version 22. The data were analysed by making use of descriptive and association statistics. Two-way cross-tabulation, with the Chi-square test, was used to determine whether the two variables were related (Alston & Bowles, 2003:258,264). It should be kept in mind that because of the small sample size the type II error might be a problem, meaning the null hypothesis is not rejected when it is in fact false. The statistical significance was set at $p < 0.1$ due to the small sample size.

Before data collection, the authors obtained permission from the management of the four treatment centres, and ethics clearance from the Research Ethics Committee of the Faculty of Humanities at the University of Pretoria. Ethical considerations, such as avoidance of harm, voluntary participation, written informed consent by each respondent, no deception of respondents, and no violation of respondents' privacy of confidentiality informed the implementation of the survey.

RESEARCH RESULTS AND DISCUSSION

The research results and discussion section focuses on the respondents' biographical profile and the risk factors for relapse.

Biographical profile of respondents

A total of 44 respondents (n=44) from the various treatment centres participated voluntarily in this study. Thirty-five (80%) were male and 9 (20%) female. Several studies have reported higher drug prevalence rates among males than females; however, this does not necessarily reflect lower levels of use among women, but may allude to women experiencing more barriers in accessing treatment (McCann, Burnhams, Albertyn & Bhoola, 2011:47). The mean age of the respondents was 26 years at the time of the study. The youngest respondents were 19 years old and the oldest was 38 years old. Most respondents indicated the abuse of *nyaope* (heroin and dagga mix), followed by crack cocaine. With regard to the level of education, the majority of the respondents (57%) did not complete their education up to Grade 12, while 25% matriculated and 18% continued to tertiary education. Most respondents were unemployed at the time of the study; 70.4% of the respondents were unemployed, and only 11.4% had full-time employment, while another 11.4% had part-time employment. Two (4.5%) were part-time students and one (2.3%) respondent was suspended from his employment. Most respondents were single (83.72%), which also correlates with the phase of adulthood in which the respondents develop their adult identity and establish relationships.

Risk factors for relapse

Environmental, inter- and intrapersonal and physical risk factors are outlined. The percentage of respondents who confirmed the indicated risk factors are reported according to gender.

Environmental risk factors

Certain environmental risk factors predispose relapse among young African adults. These risk factors are presented in Table 1.

TABLE 1
ENVIRONMENTAL RISK FACTORS

Environmental risk factors	Male %(n)	Female %(n)	Chi-Square test (p-value)
Easy access to drugs	77.1(35)	37.5(8)	.028*
Drug dealers at places frequently passed	77.1(35)	88.9(9)	.436
Challenged by too many triggers	85.7(35)	88.9(9)	.805
Lacked the ability to cope with triggers	79.4(34)	100(8)	.160

BOLD indicates statistical significance (p<0.1).

* Some of the expected frequencies in the table are less than 5.

** Cronbach alpha = 0.694

Availability and accessibility of drugs

Leggett (2001:20) specifies that various factors contribute to the increase of drug abuse and distribution in South Africa. The opening of borders especially has allowed immigrants with substantial experience in the international drug trade to import and market drugs aggressively. In the present study a statistical association (p=.028) was found with regard to easy access to drugs, whereby it seems to be mostly a predisposing

factor for relapse among young African males. The easier it is for young African adults to access drugs after treatment, the more significant the risk for relapse becomes.

Drug dealing

South Africa is believed to be one of the largest producers of dagga in the world, and international demand is very high. This drug trade is, however, not one-sided; while dagga is being exported to countries internationally, other drugs are being imported, increasing the availability of drugs in South Africa (Leggett, 2001:35). In the present study females (88.9%) were found to be more inclined to relapse as a result of contact with drug dealers upon release from treatment centres.

Environmental cues

Environmental cues, including the availability and access to drugs, are part of the recovering drug-abusing person's environment after treatment (Barone *et al.*, 2011:353). If the recovering drug-abusing person cannot cope with environmental cues, the result might be relapse.

There was a considerably high indication of users of both genders being challenged by too many triggers (such as people, places, things and times) and not being able to cope effectively. All the female respondents who answered the question reported that they lacked the ability to cope effectively with triggers, compared to 79.4% of the male respondents.

Interpersonal/social risk factors

Interpersonal or social factors that seem to be risk factors for relapse are captured in Table 2.

TABLE 2
INTERPERSONAL/SOCIAL RISK FACTORS

Interpersonal/social risk factors	Male %(n)	Female %(n)	Chi-Square test (p-value)
Difficult to avoid social gathering places (taverns, bars and clubs)	61.8(34)	62.5(8)	.969
Peer pressure	71.4(35)	66.7(9)	.780
Pressure from one significant friend	62.9(35)	66.7(9)	.832
Social group still abuses drugs or alcohol	66.7(33)	44.4(9)	.224
Glamorised drug abuse in peer group	77.1(35)	62.5(8)	.392
Difficult to avoid social gatherings	54.5(33)	66.7(9)	.515
Limited access to services in community	54.3(35)	66.7(9)	.504
Lack of recreational activities to keep busy	60.0(35)	44.4(9)	.401
Boredom	88.2(34)	62.5(8)	.079*
Stigmatisation by community	77.1(35)	77.8(9)	.968
Dealing with conflict	74.3(35)	75.0(8)	.967
Lacked support needed after treatment	88.6(35)	77.8(9)	.400
Difficulty finding employment	76.5(34)	37.5(8)	.032*

BOLD indicates statistical significance ($p < 0.1$).

* Some of the expected frequencies in the table are less than 5.

** Cronbach alpha = 0.78

Peer-group influence

Wadhwa (2009:777) recognises peer pressure as one of the most frequent high-risk situations for relapse. In the present study 71.4% male and 66.7% female respondents indicated peer pressure as predisposing them to relapse. Both genders indicated that the glamorising of drug abuse in their peer groups signifies a risk to relapse. Only a few female respondents (44.4%), however, indicated that their social group still abused drugs and thus predisposed them to relapse. Both genders indicated that they found it difficult to avoid social gatherings and places where they are challenged by peers abusing alcohol and/or drugs.

Limited access to services in the community

Limited access to services and poor service delivery are the reality faced by many communities in the Gauteng Province, with service delivery in general, and inadequate housing, water, sanitation and electricity being at the top of the list (Grant, 2014).

It was found that more female (66.7%) than male (54.3%) respondents are affected by limited access to services such as housing, water, sanitation and electricity. It can be argued that hygiene has a higher priority for females, as female bodily functions make them susceptible to infection without proper access to sanitation.

Lack of recreational activities

The lack of recreational activities in communities contributes to the amount of leisure time that young African adults have per day. Irby, Pittman and Tolman (2003:13-27) are of the opinion that the way young people spend their leisure time is also linked to pressing threats to their wellbeing such as HIV/AIDS, anti-social behaviour, conflict and drug abuse. Irby *et al.* (2003:13-27) further postulate that in developing societies young people tend to spend most of their time at home, with boys generally venturing outside the family with peers somewhat more than girls. This might explain why more males than females reported the lack of recreational activities available to them.

More male (60%) than female (44.4%) respondents reported a lack of recreational activities in their communities. The lack of recreational activities can be linked to boredom. In relation to boredom, the statistical association ($p=.079$) indicated that mostly male respondents felt that being faced with boredom is a trigger to relapse. The lack of recreational activities might not be affecting females as much as males, as they are often occupied with household chores such as cleaning, cooking and taking care of younger siblings.

Stigmatisation by community members

Room (2005:144) defines stigmatisation according to Wisconsin law as “disqualification from social acceptance, derogation, marginalisation and ostracism encountered by persons who abuse alcohol or other drugs as the result of societal negative attitudes, feelings, perceptions, representations and acts of discrimination.” Luoma, Twohig, Waltz, Hayes, Roget, Padilla and Fisher (2007:1331) suggest there is little doubt that a person who abuses drugs faces stigma. In this article the focus is more on enacted

stigma, which Luoma *et al.* (2007:1332) refer to as directly experienced social discrimination, such as difficulty in obtaining employment, reduced access to housing, poor support for treatment and interpersonal rejection. A considerable number of male (77.1%) and female (77.8%) respondents indicated that they felt stigmatised by community members, even after treatment.

Conflict

O'Connell and Bevvino (2007:53) state that during drug use conflict is dealt with in dysfunctional ways – the psychological consequences of conflict may have been muted and diluted by the presence of drugs in the system. After treatment, the person in recovery needs to manage conflict without drugs as a crutch.

Both male and female respondents indicated that they had relapsed because they thought that they would have improved abilities to deal with conflict while under the influence of drugs. There was not a noteworthy difference among the genders; 74.5% male and 75% of the female respondents indicated conflict as a predisposing factor for relapse.

Lack of support after treatment

Support does not only imply support from family members, and it should be regarded as a responsibility of the recovering drug abuser to seek other forms of support after treatment as well. Meyer (2005, as cited in Van der Westhuizen, Alpaslan and De Jager, 2013:2), refers to aftercare as continued support and guidance to develop a sober lifestyle and to reintegrate into society to prevent relapse. In the present study 88.6% of the male and 77.8% of the female respondents indicated that they had relapsed after previous treatment because they did not have sufficient support following treatment.

Employment status – difficulty finding employment

It is a known reality that opportunities for employment are limited in South Africa and especially for those less educated (StatsSA, 2015). Difficulty in finding employment as a predisposing factor for relapse was indicated to be much lower among female (37.5%) than male (76.5%) respondents. This might be because males have the perception that they need to be employed as dictated by traditional gender roles. A statistical association ($p=.032$) between gender and employment was evident. Furthermore, the statistical association ($p=.079$) indicates that males are more affected by boredom as a risk factor to relapse.

The same point as with environmental risk factors can be made when considering the adaptation model. It can be anticipated that if the recovering drug abusers experience difficulty in adapting to the environment, this is most likely to also affect their intrapersonal experiences.

Intrapersonal risk factors

Intrapersonal factors that seem to be pertinent in predisposing the respondents to relapse are presented in Table 3.

TABLE 3
INTRAPERSONAL RISK FACTORS

Intrapersonal risk factors	Male %(n)	Female %(n)	Chi-Square test (p-value)
Experienced negative emotional states	74.3(35)	77.8(9)	.829
Experienced euphoric states	60.0(35)	62.5(8)	.896
Dealing with emotions by using drugs	71.4(35)	100(9)	.068*
Loneliness	76.5(34)	66.7(9)	.549
Experienced stressful life event	57.6(33)	66.7(9)	.622
Lack of effective coping mechanisms	62.9(35)	87.5(8)	.180
Do not believe in self (lack self-efficacy)	48.6(35)	0.0(0)	.011*
Easily influenced by others	65.7(35)	44.4(9)	.242
Craving drugs and/or alcohol	77.1(35)	66.7(9)	.517
Felt less committed to maintain sobriety	70.6(34)	66.7(9)	.820
Lost motivation to maintain sobriety	77.1(35)	77.8(9)	.968
Controlled use	85.7(35)	88.9(9)	.805
Not attending aftercare support groups	57.1(35)	25.0(8)	.101

BOLD indicates statistical significance ($p < 0.1$).

* Some of the expected frequencies in the table are less than 5.

** Cronbach alpha = 0.754

Emotions

Bain (2004:153) established that a primary problem among addicts is dealing with their emotions. Campos (2009:773) declares that the most frequently cited reason for relapse among drug users is a negative state of mood. Illicit drugs are psychoactive (mood altering) and they give pleasure to the consumer (Benavie, 2009:9). By using these drugs, moods are altered and pleasure is experienced, meaning that people never really learn how to cope with emotions on their own.

In this study both male and female respondents reported experiencing negative or euphoric emotional states which caused them to relapse; 74.3% of the male, compared to 77.8% of the female, respondents indicated relapse due to negative emotional states. Furthermore, 60% of the male, compared to 62.5% of the female, respondents indicated relapse, because they experienced euphoric states. All the female respondents reported that they dealt with their emotions by using drugs, compared to 71.4% of the male respondents. There was a statistical association ($p = .068$) which indicates that dealing with emotions by using drugs occurs predominantly among females.

Loneliness

Halsey (1979), as quoted by Bain (2004:130), defines loneliness as being “without friendship or companionship” and the feeling of being “depressed from lack of friendship or companionship.” This definition implies that a person could experience negative emotional consequences (sadness or depression) when there is a lack of meaningful or close relationships.

The study by Bain (2004:130) also found that loneliness was one of the main contributing factors in relapse. Stickley, Koyanagi, Kuposov, Schwab-Stone and Ruchkin (2014:368) state that loneliness can be an extremely painful and distressing phenomenon. Furthermore, Stickley *et al.* (2014:368) state that in order to cope with, or minimise, the painful feelings that can emanate from loneliness, people pursue “alternative gratifications” which might include risky behaviour such as drug abuse.

More male (76.5%) than female (66.7%) respondents indicated that loneliness was a cause of relapse for them. This might be explained by the fact that females are more attached to family and friends, especially when it comes to sharing thoughts and feelings. As indicated above, many respondents reported a lack of support from but also stigmatisation by community members as contributing factors to the feeling of loneliness, since both conditions resemble rejection. Within the family context lack of trust was also reported to be a predisposing factor to relapse, again causing the young African adult to feel rejected and experience a lack of belonging. Respondents reported highly on peer pressure being a predisposing factor to relapse. This might be because they seek a sense of belonging within their peer groups, which compensates for the lack of belonging that they feel in their families and communities.

Lack of effective coping mechanisms and stress management

Hunter and Gillen (2006:115) define a stressor as an event that occurs in one’s environment that is likely to pose a threat, and experiencing a stressor generally requires a response so that the individual avoids negative stress-reaction symptoms. Hunter and Gillen (2006:117) state that coping is any behavioural, social or psychological action taken in response to a perceived stressor.

It was notable to find that more female (87.5%) than male (62.9%) respondents reported that they lacked effective coping mechanisms, which predisposed them to relapse. Experiencing a stressful life event was also indicated more among female (66.7%) than male (57.6%) respondents. Zhao, Shi, Zhang, Epstein, Zhang, Lui, Kosten and Lu (2009:720) agree that stress is associated with relapse to drug abuse. The present study found that a statistically significant higher number of males than females do not believe in themselves ($p=.011$), which is peculiar considering that most female respondents perceived themselves as lacking coping mechanisms and stress-management skills. It would be expected that the higher the perception that the person lacked coping mechanisms, the higher the indication would be that the person lacks self-efficacy.

As indicated above, most respondents expressed that they lack effective coping mechanisms in relation to dealing with stressful life events. Zhao *et al.* (2009:720) are of the opinion that stress enhances abstinent addicts to recall memories of drugs as stress relievers. Harrington, Cleveland and Harris (2010:60) suggest that recovering addicts who avoid coping with stress succumb easily to cravings for addictive substances, making them more likely to relapse during recovery seeing that cravings are a strong predictor of relapse.

Lack of assertiveness and easily influenced by others

Lack of assertiveness and being easily influenced by others did not seem to be an important predictor of relapse among female (44.4%), as opposed to male (65.7%) respondents. In correlation with this, regarding peer pressure as a predisposing factor to relapse (as discussed above), females indicated that peer pressure influenced them least to relapse (66.7%), as compared to males (71.4%). It seems as though males are more likely to conform to peer pressure after treatment, which puts them at risk to relapse.

It is the opinion of the authors that more male respondents, especially in townships, conform to the lifestyle associated with drug abuse (including gangsterism) to fit in with the growing tendency of these phenomena in their communities. Being part of a gang provides the young African adult with a higher perceived status.

Cravings

Cravings are a strong predictor of relapse (Harrington *et al.*, 2010:60). Doweiko (2006:399) states that a craving is in itself a poor predictor of relapse. It may be triggered by drug-use cues (smells, the sight of the drug, sounds, etc.) and it could trigger moods and memories that predispose the individual to drug use. Larimer *et al.* (1999:156) give evidence that on-going cravings may erode the person's commitment to maintaining abstinence as the desire for immediate gratification increases. Cravings are thus triggered by certain environmental cues influencing the underlying process of a craving – an individual will be confronted by a trigger (high-risk situation) which will be followed by thoughts of using drugs, eventually progressing to a craving for drug use.

In this study 77.1% of the male and 66.7% of the female respondents reported that they craved drugs and this caused them to relapse. The authors therefore suggest that males might be faced with more drug-use cues than females would, which increases their experience of craving drugs.

Losing motivation to maintain abstinence and feeling less committed to remaining abstinent

As maintained by Marlatt and Witkiewitz (2005:11), “motivation may relate to the relapse process in two distinct ways, the motivation for positive behaviour change and the motivation to engage in the problematic behaviour.” Respondents reported that they started to lose motivation and felt less committed to staying abstinent. Almost in equal numbers, both genders indicated that they lost motivation to maintain their abstinence. More male (77.1%) than female (66.74%) respondents indicated the loss of commitment to maintaining abstinence.

Young African adults might lose interest in maintaining abstinence for various reasons. Some of the reasons might include the above-mentioned predisposing factors to relapse – dealing with emotions, loneliness (by using drugs they become part of a peer group), stigmatisation by community members (they are perceived as drug abusers even after treatment, thus influencing their perception of themselves), stress and lack of effective coping mechanisms. By using drugs young African adults cope with day-to-day

challenges, because being under the influence of drugs makes these challenges seem less threatening, and this makes the drug-abusing lifestyle seem more comfortable. Depending on the phase of adult development, seeking excitement might also affect motivation and commitment to maintaining abstinence.

Perception of controlled drug use

Controlled use could be contemplated as a short-term reward contingency, such as the reduction of negative mood states, the inducement of euphoria, a shift in cognition toward a more positive sense of self, and stress reduction (Campos, 2009:773). For example, the young African adult feels stressed because of difficulty in finding employment, bearing in mind the recall of memories that drugs are a stress reliever. The young African adult might reason that the drug would be used only use to relieve the stress, but considering the process and phases of addiction, it is highly unlikely that the usage would then cease. Positive outcome expectancy with regard to the influence of the drug (reducing anxiety and increasing euphoria) might lead to relapse, as little attention is paid to the negative consequences of drug use.

In this study both genders indicated that they thought they could control their use of drugs after treatment. Controlled use of drugs was indicated by 85.7% male and 88.9% female respondents. The authors relate the phenomenon of controlled use to outcome expectancy.

Decision not to attend aftercare services

Keller (2003, as quoted by Doweiko, 2006:400) states that through a series of seemingly irrelevant decisions the newly-recovered individuals could place themselves in a high-risk situation, possibly without being aware of more than the last decision in a chain of choices that ultimately results in a relapse. These irrelevant decisions could collectively lead to a relapse (Doweiko, 2006:400). Deciding not to attend aftercare services following treatment can result in a downward spiral for the young African adult, seeing that it might give way to a chain of wrong, not carefully thought-through decisions.

Mostly the male respondents (57.1%) indicated that deciding not to attend aftercare services following treatment predisposed them to relapse.

Physical risk factors are another category and are discussed below.

Physical risk factors

The only physical risk factor to relapse that was indicated by the respondents was experiencing physical pain. The findings are presented in Table 4.

TABLE 4
PHYSICAL RISK FACTORS

Physical risk factor	Male %(n)	Female %(n)	Chi-Square test (p-value)
Experienced physical pain	57.1(35)	11.1(9)	.014*

BOLD indicates statistical significance ($p < 0.1$).

* Some of the expected frequencies in the table are less than 5.

Doweiko (2006:401), drawing on Dimeff and Marlatt (1995), notes that a person experiencing a negative physical state such as illness, postsurgical distress, or injury might face an elevated risk of a relapse. A number of studies have demonstrated a higher prevalence of chronic pain and greater pain sensitivity among females compared to males, as a result of sex hormones influencing pain sensitivity, as well as the pain threshold and pain tolerance in women (Wiesenfeld-Hallin, 2005:137).

It became apparent that physical risk factors do not commonly predispose relapse among young African adults; 57.1% of the male respondents indicated that they relapsed because they experienced some form of physical pain. Only one female respondent (11.1%) indicated that this influenced her to relapse. The statistical association ($p = .014$) confirms that mainly males are predisposed by physical pain to relapse.

CONCLUSIONS

Although care was taken to recruit respondents from both governmental and private treatment centres across the Gauteng Province, non-probability sampling and the sample size do not permit generalisations. However, the conclusions and recommendations could hint at aspects for social workers to consider during treatment and aftercare/reintegration services to young African adults in the metropolitan areas of developing countries.

- Young African adults are functioning within environments that are not conducive to recovery. The availability and accessibility of drugs are increasing evermore within their communities.
- Limited access to services and poor service delivery within communities are affecting especially young female African adults.
- Young African adults are placing themselves at risk of struggling to find employment by not completing secondary and/or tertiary education. Employment opportunities seem to decrease for those who are less educated.
- Young African adults are lacking basic life skills (i.e. conflict management, stress management, coping skills and assertiveness). The ability to cope and deal with emotions, stress and conflict could enable the maintenance of abstinence.
- Boredom is increased with the lack of recreational activities and difficulty in finding employment, which eventually influence recovery. Because of the lack of recreational activities, young African adults frequently spend more time with their peer groups, resulting in relapse.

- Lack of support from and stigmatisation by community members can create a sense of loneliness and eventually cause the young African adult to feel less committed and motivated to maintaining abstinence.
- Loneliness can cause young African adults to seek comfort within their drug-abusing peer group.
- Cravings and the thought of being able to control drug use after treatment are risk factors for relapse.
- Skills and knowledge gained during treatment are not being internalised during treatment, which contributes to the skills not being applied once people are discharged from treatment.
- Physical pain is more likely to relate to relapse among young male African adults.

Some of the conclusions of this study corroborate the findings of another South African study that focused on relapse risk factors amongst adolescents in the Western Cape (Van der Westhuizen, 2007). For example, relapse risks such as the availability and accessibility of drugs, peer group influence, lack of recreational activities, stigmatisation, lack of support, negative feelings, lack of life skills, lack of assertiveness, and cravings and reasoning such as motivation confirm that young African adults have some similar relapse risks as other ethnic and age groups.

RECOMMENDATIONS

The recommendations are offered to improve localised social work services delivered by treatment centres and for aftercare/reintegration services to young African adults in an attempt to prevent relapse among the target group.

Recommendations for treatment centres to improve service delivery to young African adults

- Considering that there is an apparent lack of young African adults completing their education, treatment centres should assist in providing information and referrals to adult-based educational training (ABET) institutions.
- Given the fact that peer groups often contribute to relapse, there is a need for prevention programmes during adolescence (in particular for those aged 12-18 years). Prevention programmes should be on the level of the audience, e.g. more audio-visual and making use of drama and graphic images to which adolescents can relate.
- During treatment, family members should be included at some stage with the aim of providing information on addiction and establishing sufficient and effective support for service users.
- Life skills should be developed during treatment, especially focusing on emotions, considering that there was a high indication of relapse because of the inability to cope effectively with emotions. Social workers rendering treatment should assist the

service users to develop emotional maturity by allowing them to feel, acknowledge and manage their emotions.

- The Department of Social Development, in conjunction with the Department of Public Works (e.g. Expanded Public Works Programme), should develop a programme where service users can be absorbed into a system that assists in the reintegration into society and finding employment opportunities. By young adults being absorbed into training or labour, boredom can be prevented, socioeconomic circumstances can improve and further stigmatisation prevented.
- It seems that during treatment service users are not internalising the information and skills provided to them, which prevents their successful application upon release from treatment centres. Cognitive behavioural therapy (CBT) could be explored and used to guide therapy, seeing that it allows people to focus on day-to-day life problems. CBT facilitates the acquisition and performance of coping skills used to manage high-risk situations, and could enhance the service user's ability to maintain abstinence (Litt, Kadden & Kabela-Cormier, 2009:1837).
- Males and females indicated similarities and differences in the risk factors for relapse. Possible guidelines for **treatment programmes for males** include:
 - Identifying environmental cues, especially peers, and ways of coping with them in order to avoid frequent cravings;
 - Assertiveness training and refusal of drugs skills;
 - Accentuate the link between drug abuse, crime and gangsterism;
 - Alternative ways of socialising other than going to pubs, bars and clubs;
 - Appropriate ways of spending idle time;
 - Develop awareness of stigmatisation by community and means to deal with it;
 - Conflict management;
 - Information on skills development workshops and support services in communities;
 - Emotional awareness;
 - Advise against controlled drug use and focus on measures to manage motivation and commitment to maintain abstinence;
 - Benefits and importance of attending aftercare services;
 - Alternatives to dealing with pain.
- The following guidelines are unique aspects to consider for the **treatment of females**:
 - Risks associated with sex work and relationships with drug distributors;
 - Stress management and coping skills, including coping with negative emotions;
 - Identifying environmental cues and ways of coping with them;

- Coping with cravings;
- Advise against controlled use and focus on abstinence;
- Building self-efficacy.

Recommendations for aftercare/reintegration services

- Social workers in the field of addiction should be educated in aftercare services available and a structure for referral of service users should be developed to ensure utilisation of aftercare services. Social workers should be trained in the specific task of delivering aftercare services.
- Aftercare programmes should include the development of coping skills and basic life skills, such as stress management, conflict management, assertiveness, effective dealing with emotions and problem-solving skills.
- The family should be involved in aftercare services in order to establish support.
- Currently there is a structured guideline for delivering aftercare, which is formulated by the Department of Social Development (2013). This guideline presents structured discussion sessions for adults. It is recommended that a structured outline is also provided to focus on young African adults.
- The risk factors for relapse that were found to be significant in this study can be used as an assessment tool during the assessment phase of aftercare, where service users can indicate whether they relate to specific risk factors for relapse. To assist during the planning phase, the indicated predisposing factors should be prioritised in accordance to which factors influence them most strongly. Following the stage of prioritising relapse risks, aftercare and reintegration plans can be developed to address each risk in order to prevent relapse.
- Aftercare programmes should provide service users with opportunities for recreational activities in an attempt to minimise boredom.
- The Department of Social Development should be responsible for the development of a referral guideline booklet/website that captures all aftercare services and support groups available for service users after treatment.
- Partnerships should be investigated with potential employers to facilitate reintegration services and specifically job placements.

The high relapse rate amongst young African adults is a matter of concern. It is envisaged that the findings of this study as well as the guidelines and the recommendations presented here could make a contribution towards improving the treatment of young adults and preventing relapse among this vulnerable group.

REFERENCES

ADINOFF, B., TALMADGE, C., WILLIAMS, M.J., SCHREFFER, E., JACKLEY, P.K. & KREBAUM, S.R. 2010. Time to Relapse Questionnaire (TRQ): a measure of

sudden relapse in substance dependence. **American Journal of Drug and Alcohol Abuse**, 36:140-149.

ALSTON, M. & BOWLES, W. 2003. **Research for social workers: an introduction to methods** (2nd ed). London: Routledge.

AMERICAN PSYCHIATRIC ASSOCIATION. 2013. **Diagnostic and Statistical Manual of Mental Disorders (DSM-V)**. Washington, DC: APA.

BABBIE, E. 2007. **The practice of social research** (11th ed). Belmont, CA: Thomson/Wadsworth.

BAIN, K.A. 2004. **Chased by the dragon: the experience of relapse in cocaine and heroin users**. Pretoria: University of Pretoria. (MA Dissertation)

BARONE, S.H., ROY, C.L. & FREDERICKSON, K.C. 2011. Instruments used in Roy Adaptation Model-Based Research: review, critique, and future directions. **Nursing Science Quarterly**, 21(4):353-362.

BENAVIE, A. 2009. **Drugs: America's holy war**. Marceline: Wadsworth Publishing Company.

BENNETT, M.D. & OLUGBALA, F.K. 2010. Don't bother me, I can't cope: stress, coping and problem behaviours among young African American males. In: WALDO, E. & JOHNSON, J.R. (eds), **Social work with African American males: health, mental health, and social policy**. New York: Oxford University Press.

BLESS, C., HIGSON-SMITH, C. & KAGEE, A. 2006. **Fundamentals of social research methods: an African perspective** (4th ed). Cape Town: Juta and Company Ltd.

BOTMA, Y., GREEFF, M., MALAUDZI, F.M. & WRIGHT, F.M. 2010. **Research in Health Sciences**. Cape Town: Pearson Education South Africa.

BRAY, R. 2003. **Predicting the social consequences of orphanhood in South Africa**. Cape Town: Centre for Social Science Research.

BROOK, J.S., BROOK, D.W. & PAHL, K. 2006. The developmental context for adolescent substance abuse intervention. In: LIDDLE, H.A. & ROWE, C. (eds), **Adolescent substance abuse: research and clinical advances**. New York: Cambridge University Press.

CAMI, J. & FARRÈ, M. 2003. Mechanisms of disease: drug addiction. **New England Journal of Medicine**, 349(10):975-986.

CAMPOS, M.D. 2009. Relapse. In: FISHER, G.L. & ROGET, N.A. (eds), **Encyclopedia of Substance Abuse Prevention, Treatment and Recovery**, 2:772-775.

CRESWELL, J.W. 2014. **Research design: qualitative, quantitative, and mixed methods approaches**. Los Angeles: Sage Publications.

DELPORT, C.S.L. & ROESTENBURG, W.J.H. 2011. Quantitative data collection methods: questionnaires, checklists, structured observation and structured interview

schedules. **In:** DE VOS, A.S. (ed), STRYDOM, H., FOUCHÉ, C.B. & DELPORT, C.S.L. **Research at grass roots for the social sciences and human service professions** (4th ed). Pretoria: Van Schaik Publishers.

DOBRATZ, M.C. 2008. Moving nursing science forward within the framework of the Roy Adaptation Model. **Nursing Science Quarterly**, 21(3):255-259.

DOWEIKO, H.E. 2006. **Concepts of chemical dependency**. Belmont: Thomson Brooks/Cole.

FOUCHÉ, C.B. & DELPORT, C.S.L. 2011. In-depth review of literature. **In:** DE VOS, A.S. (ed), STRYDOM, H., FOUCHÉ, C.B. & DELPORT, C.S.L. **Research at grass roots for the social sciences and human service professions** (4th ed). Pretoria: Van Schaik Publishers.

FOUCHÉ, C.B. & DE VOS, A.S. 2011. Formal formulations. **In:** DE VOS, A.S. (ed), STRYDOM, H., FOUCHÉ, C.B. & DELPORT, C.S.L. **Research at grass roots for the social sciences and human service professions** (4th ed). Pretoria: Van Schaik Publishers.

GEYER, S. & LOMBARD, A. 2014. A content analysis of the South African National Drug Master Plan: lessons for aligning policy with social development. **Social Work/Maatskaplike Werk**, 50(3):329-349.

GRANT, L. 2014. Research shows sharp increase in service delivery protests. **Mail & Guardian**, 12 February. [Online] Available: <http://mg.co.za/article/2014-02-12-research-shows-sharp-increase-in-service-delivery-protests> [Accessed: 01/08/2014].

HARRINGTON CLEVELAND, H. & HARRIS, K.S. 2010. The role of coping in moderating within-day associations between negative triggers and substance use cravings: A daily diary investigation. **Addictive Behaviors**, 35(1):60.

HEINZ, W.R. 2009. Youth transitions in an age of uncertainty. **In:** FURLONG, A. (ed), **Youth and young adulthood: new perspectives and agendas**. New York: Routledge.

HOLT, N. & WALKER, I. 2009. **Research with people, theory, plans and practicals**. New York: Palgrave Macmillan.

HUNTER, I.R. & GILLEN, M.C. 2006. Alcohol as a response to stress in older adults: a counseling perspective. **Adultspan Journal**, 5(2):114-126.

HYMAN, S.E. & MALENKA, R.C. 2001. Addiction and the brain: the neurobiology of compulsion and its persistence. **Neuroscience**, 2:695-703.

IRBY, M., PITTMAN, K. & TOLMAN, J. 2003. Blurring the lines: expanding learning opportunities for children and youth. **New Direction for Youth Development**, 97:13-27.

KRING, A.M., DAVISON, G.C., NEALE, J.M. & JOHNSON, S.L. 2007. **Abnormal Psychology** (10th ed). New York: John Wiley & Sons.

KONSTAM, V. 2007. **Emerging and young adulthood: multiple perspectives, diverse narratives**. New York: Springer Science & Business Media.

LARIMER, M.E., PALMER, R.S. & MARLATT, G.A. 1999. Relapse prevention: an overview of Marlatt's Cognitive-Behavioural Model. **Alcohol Research and Health**, 23(2):151-160.

LEGGETT, T. 2001. **Rainbow vice: the drugs and sex industries in the new South Africa**. Claremont: New Africa Books.

LITT, M.D., KADDEN, R.M. & KABELA-CORMIER, E. 2009. Individualised assessment and treatment program for alcohol dependence: results of an initial study to train coping skills. **Addiction**, 104:1837-1848.

LUOMA, J.B., TWOHIG, M.P., WALTZ, T., HAYES, C., ROGET, N., PADILLA, M. & FISHER, G. 2007. An investigation of stigma in individuals receiving treatment for substance abuse. **Addictive Behaviors**, 32(7):1331-1346.

MARCK, J. 1997. Aspects of male circumcision in sub-equatorial African culture history. **Supplement to Health Transition Review**, 7:337-359.

MARLATT, G.A. & DONOVAN, D.M. 2005. **Relapse prevention: maintenance strategies in the treatment of addictive behaviors** (2nd ed). New York: Guilford Press.

MARLATT, G.A. & WITKIEWITZ, K. 2005. In: MARLATT, G.A. & DONOVAN, D.M. (eds), **Relapse prevention: maintenance strategies in the treatment of addictive behaviors** (2nd ed). New York: Guilford Press.

McCANN, M., BURNHAMS, N.H., ALBERTYN, C. & BHOOLA, U. 2011. **Alcohol, drugs and employment** (2nd ed). Claremont: Juta & Co Ltd.

McCRADY, B.S. 2001. Alcohol use disorders. In: BARLOW, D.H. (ed), **Clinical handbook of psychological disorders** (3rd ed). New York: Guilford Press.

MEASHAM, F., PARKER, H. & ALDRIDGE, J. 1998. Teenage transition from adolescent recreational drug use to the young adult dance culture in Britain in the mid 1990's. **Journal of Drug Issues**, 28(1):9-32.

MEINTJIES, H., HALL, K., DOUBLE-HUGH, M. & BOULLE, A. 2010. Orphans of the AIDS epidemic: the extent, nature and circumstances of child-headed households in South Africa. **AIDS Care**, 22(1):40-49.

NATION, M. & HEFLINGER, C.A. 2006. Risk factors for serious alcohol and drug use: the role of psychosocial variables in predicting the frequency of substance use among adolescents. **American Journal of Drug and Alcohol Abuse**, 32:415-433.

NATIONAL TREASURY. 2011. **Confronting youth unemployment: policy options for South Africa**. Pretoria: National Treasury.

NEWMAN, B.M. & NEWMAN, P.R. 2012. **Development through life: a psychosocial approach** (11th ed). Belmont: Wadsworth Publishing Company.

O'CONNELL, D.F. & BEVVINO, D. 2007. **Managing your recovery from addiction: a guide for executives, senior managers, and other professionals**. New York: Haworth Press.

- OVERTON-DE KLERK, N. & OELOFSE, E. 2010. Poor communities as corporate stakeholders: a bottom-up research approach. **Communicatio: South African Journal for Communication Theory and Research**, 36(3):388-408.
- OXFORD DICTIONARY. 2012a. **Interpersonal**. [Online] Available: <http://oxfordictionaries.com/definition/Interpersonal?q=Interpersonal> [Accessed: 18/07/2012].
- OXFORD DICTIONARY. 2012b. **Intrapersonal**. [Online] Available: <http://oxfordictionaries.com/definition/Intrapersonal?q=Intrapersonal> [Accessed: 18/07/2012].
- RAMLAGAN, S., PELTZER, K. & MATSEKE, G. 2010. Epidemiology of drug abuse treatment in South Africa. **South African Journal of Psychiatry**, 16(2):40-49.
- ROMAN, N.V., HUMAN, A. & HISS, D. 2012. Young South African adults' perceptions of parental psychological control and antisocial behaviour. **Social Behaviour and Personality**, 40(7):1163-1174.
- ROOM, R. 2005. Stigma, social inequality and alcohol and drug use. **Drug and Alcohol Review**, 24(2):143-155.
- REPUBLIC OF SOUTH AFRICA (RSA). 1997. Ministry for Welfare and Population Development. White Paper for Social Welfare. Notice 1108 of 1997. **Government Gazette**, 386(18166). Pretoria: Government Printers.
- SCHUCKIT, M.A. 2006. **Drug and alcohol abuse: a clinical guide to diagnosis and treatment** (6th ed). New York: Springer Science & Business Media.
- SIGELMAN, C.K. & RIDER, E.A. 2006. **Life-span human development** (5th ed). Belmont: Thomson Wadsworth.
- SINHA, R. 2001. How does stress increase risk of drug abuse and relapse. **Psychopharmacology**, 158:343-359.
- SOUTH AFRICAN COMMUNITY EPIDEMIOLOGY NETWORK ON DRUG USE (SACENDU). 2008. **Monitoring alcohol and drug abuse treatment admissions in South Africa: January to June 2008 (Phase 24)**. [Online] Available: <http://www.sahealthinfo.org/admodule/sacendu.htm> [Accessed: 22/02/2011].
- SOUTH AFRICAN COMMUNITY EPIDEMIOLOGY NETWORK ON DRUG USE (SACENDU). 2014. **Monitoring alcohol and drug abuse treatment admissions in South Africa: July 1996 – June 2013 (Phase 34)**. [Online] Available: <http://www.sahealthinfo.org/admodule/sacendu.html>. [Accessed: 06/06/2014].
- STATISTICS SOUTH AFRICA (StatsSA). 2015. **National and provincial labour market: youth. P0211.4.2**. [Online] Available: <http://www.statssa.gov.za/publications/P02114.2/P02114.22015.pdf> [Accessed: 05/11/2015].
- STICKLEY, A., KOYANAGI, A., KOPOSOV, R., SCHWAB-STONE, M. & RUCHKIN, V. 2014. Loneliness and health risk behaviours among Russian and U.S. adolescents: a cross-sectional study. **BMC Public Health**, 14: 366-387.

TANNER, J.L. & ARNETT, J.J. 2009. The emergence of 'emerging adulthood': the new life stage between adolescence and young adulthood. **In:** Furlong, A. (ed), **Youth and young adulthood: new perspectives and agendas**. New York: Routledge.

THE PREVENTION OF AND TREATMENT FOR SUBSTANCE ABUSE ACT 70 OF 2008. **Government Gazette**, (32150). Pretoria: Government Printer.

URBANOSKI, K.A., KELLY, J.F., HOEPPNER, B.B. & SLAYMAKER, V. 2011. The role of therapeutic alliance in substance use disorder treatment for young adults. **Journal of Substance Abuse Treatment**, 42(1):1-8.

VAN DER WESTHUIZEN, M.A. 2007. **Exploring the experiences of chemically addicted adolescents regarding relapsing after treatment**. Pretoria: University of South Africa. (MA Dissertation)

VAN DER WESTHUIZEN, M., ALPASLAN, A.H. & DE JAGER, M. 2013. Aftercare to chemically addicted adolescents: an exploration of their needs. **Health SA Gesondheid**, 18(1):1-11.

VELLEMAN, R.D.B., TEMPLETON, L.J. & COPELLO, A.G. 2005. The role of family in preventing and intervening with substance use and misuse: a comprehensive review of family interventions, with a focus on young people. **Drug and Alcohol Review**, 24:93-109.

WADHWA, S. 2009. Relapse. **In:** FISHER, G.L. & ROGET, N.A. (eds), **Encyclopedia of Substance Abuse Prevention, Treatment, and Recovery**, 2:772-778.

WEBSTER, C. 2009. Young people, 'race' and ethnicity. **In:** FURLONG, A. (ed), **Youth and young adulthood: new perspectives and agendas**. New York: Routledge.

WIESENFELD-HALLIN, Z. 2005. Sex differences in pain perception. **Gender Medicine**, 2(3):137-145.

ZHAO, L., SHI, J., ZHANG, X., EPSTEIN, D.H., ZHANG, X., LUI, Y., KOSTEN, T.R. & LU, L. 2009. Stress enhances retrieval of drug-related memories in abstinent heroin addicts. **Neuropsychopharmacology**, 35:7.

Ms Ilze Swanepoel, MSW Postgraduate candidate; Dr Stephan Geyer, Department of Social Work and Criminology; Dr Gretel Crafford, Department of Statistics, University of Pretoria, Pretoria, South Africa.