

Substance Abuse in South Africa, its Disorders and its Effects.

1. Introduction

Substance abuse is a big problem in South Africa as drug usage has been on a continual rise and for most substances South Africa's citizens currently consume twice the world norm (Substance Use and Abuse in South Africa: Central Drug Authority Briefing, 2011), and South Africa is therefore ranked 4th in the world for drug offence cases per 100 000 population. This rapid increase in drug consumption also had the effect that in the year 2007 there were 313 more drug syndicates than in the year 1995, this is an increase of 350.4%. What is even more shocking is that it is estimated that at least 15% of all those residing within the borders of South Africa live with a drug problem; this number is expected to climb in the near future. (SA Statistics, n.d.)

Substance abuse, according to the DSM-IV-TR, is not defined in terms of substance ingestion but rather in terms of how significantly it interferes with the individual's life. Therefore in order for an individual to be diagnosed as abusing drugs the substance of choice needs to disrupt his or her major role obligations, must place him or her in situations which is physically hazardous, land him or her in substance-related legal problems and the use continues despite persistent or recurring social or interpersonal problems brought on by the effects of the substance of choice. Therefore from the diagnostic criteria it is evident that substance abuse does not only negatively affect the user but also negatively affects those around him or her. (Barlow & Durand, 2012)

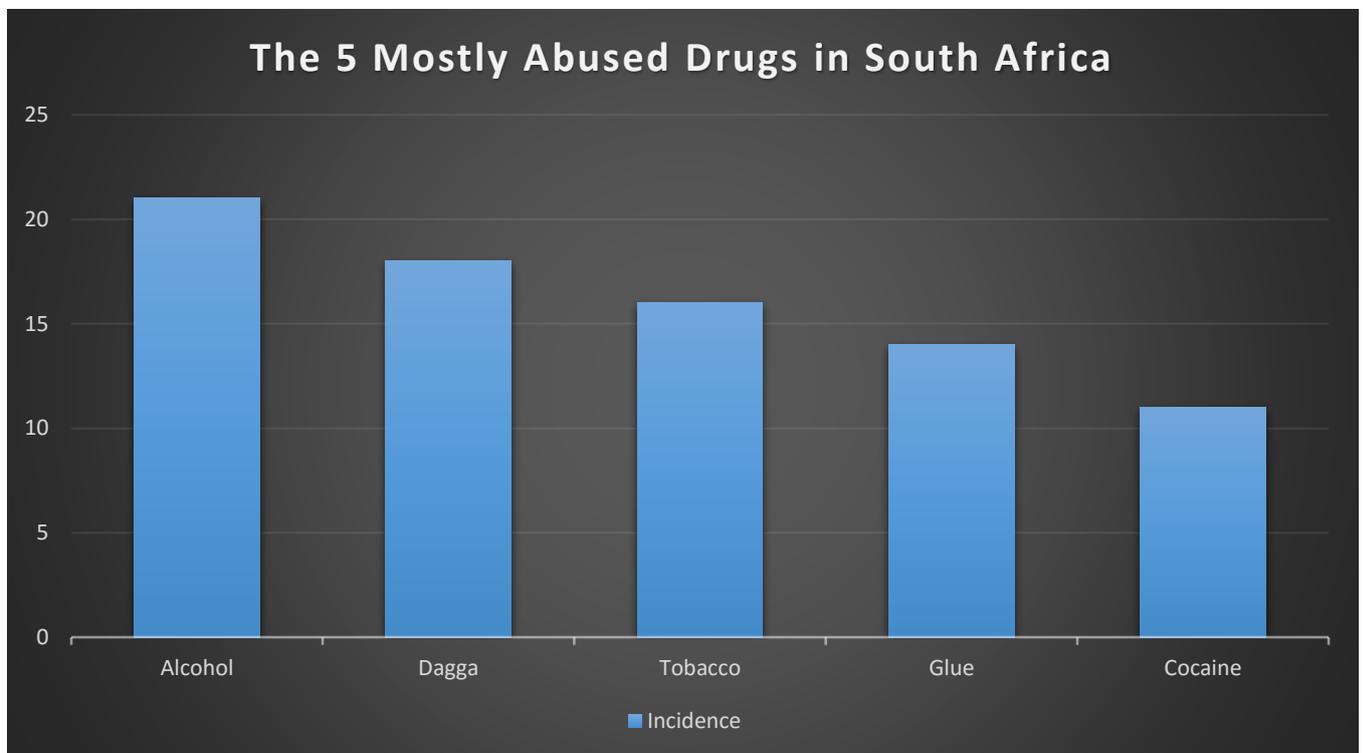
2. The Extent of South Africa's Drug Problem

The current cost to South Africa for drug abuse is estimated at around R130-billion per year and it is believed that drug abuse poses a bigger threat to the future of South Africa than the current Aids pandemic as 15% of South Africa's citizens have a drug problem. Statistics issued by the United Nations World Drug Report indicates South Africa as one of the drug capitals of the world and our inclusion in the top 10 narcotics and alcohol abusers in the world list can be attributed to the abuse of alcohol and dagga. (SA Statistics, n.d.) (Substance Use and Abuse in South Africa: Central Drug Authority Briefing, 2011)

According to statistics issued by the South African Police Service 60% of crimes is related to substance abuse as those arrested either commit crimes while under the influence or commit the crimes in order to obtain the next fix. Even though the South African government disbanded the dedicated drug-fighting unit of the SAPS (The SA Narcotics Bureau) in 2004 drug arrests increased with as much as 500% in some provinces. It must however be noted that since the disbanding of the SANAB drug-related crimes increased by roughly 30%. It is estimated that 25% of the South African currency can be linked to substance abuse. (SA Statistics, n.d.)

3. The 5 Most Abused Substances in South Africa

It must be noted that there are regional variations in terms of the use of illegal substances in South Africa (Grant, 2014). Due to this phenomenon the Central Drug Authority (CDA) conducted a survey in urban and rural areas in all nine provinces of South Africa from June 2010 till March 2011 to gather quantitative and qualitative data so as to determine which drugs are preferred over others. The respondents in this survey consisted mainly of women and therefore the data was obtained mostly from mothers and grandmothers of substance abusers. The data obtained from this survey showed that alcohol was the substance which was the most frequently used followed by cannabis, tobacco, glue and lastly cocaine. This can be shown as follows:



(Substance Use and Abuse in South Africa: Central Drug Authority Briefing, 2011)

These drugs can be classified as either licit, which refers to substances which are not illegal, or as illicit, which refers to substances which are not legal (Hanson, Venturelli, & Fleckenstein, 2014). From the data obtained from the CDA study it is evident that the substances found to be abused the most in South Africa fall into the illicit category and with alcohol which falls into the licit category as the most abused substance. Alcohol and tobacco are both legal and socially accepted substances, this might be a contributing factor as to why alcohol and tobacco are in the top three of abused substances. Cannabis (known as Dagga in South Africa), glue and cocaine fall into the illicit category of substances. These substances can furthermore also be classified according to the effect it has on the individual, this categorisation will be used to further discuss these five substances.

3.1. Depressants

Substances which fall into this category suppresses or decreases the activity taking place within the central nervous system and therefore reduces the levels of physiological arousal the individual experiences, when taken in high quantities insensibility or stupor may set in. Depressants are mainly used to relieve boredom, stress and anxiety or just as a means to relax. (Hanson, Venturelli, & Fleckenstein, 2014) (Barlow & Durand, 2012)

3.1.1 Alcohol

Alcohol refers to any refreshment which contains ethanol. Ethanol is a colourless liquid that can evaporate easily at normal temperatures and has a strong, sharp smell and taste. It is derived from the fermenting of grains, berries as well as other fruits and vegetables. South Africa forms part of the top ten nations in the world when it comes to alcohol consumption as it is estimated that South Africans consume 5 billion litres of alcohol each year, this figure translates to an average alcohol consumption of 10l per individual in a year; this is nearly a third higher than the world average. Thus it is clear that alcohol is the primary substance of abuse in South Africa. More than 37% of the adult population are binge drinkers and 30% currently have a drinking problem or run the risk of developing one in the future. (SA Statistics, n.d.) (Grant, 2014) (Williams, 2014) (Substance Use and Abuse in South Africa: Central Drug Authority Briefing, 2011)

3.1.2 Glue

Glue falls into the subcategory of inhalants as it is inhaled directly into the lungs. Glue is one of the most common inhalants and is especially attractive to younger substance users. The study conducted by the CDA has found glue to be especially prevalent under children and those living on the streets due to the fact that sniffing glue helps to these individuals to keep warm and also drive away hunger pains as it makes the tummy feel full. Euphoric effects are also common among glue sniffers. (Substance Use and Abuse in South Africa: Central Drug Authority Briefing, 2011) (Barlow & Durand, 2012) (Hanson, Venturelli, & Fleckenstein, 2014)

3.2 Stimulants

Substances which fall into this category are also referred to as gateway drugs and act in the direct opposite fashion than depressants as it increases the activity taking place within the central nervous system and therefore increases the levels of physiological arousal the individual experiences. These substances increase the alertness, excitement, blood pressure and pulse rate of the individual. Insomnia as well as loss of appetite are common effects of stimulant use. (Barlow & Durand, 2012) (Hanson, Venturelli, & Fleckenstein, 2014) When used in high doses for prolonged periods of time personality changes may be observed, the individual may also become overly violent, erratic and paranoid. Confusion, anxiety, depression and a loss of interest in sex and food is also observed in some individuals. (Barlow & Durand, 2012) (Hanson, Venturelli, & Fleckenstein, 2014)

3.2.1 Tobacco

Tobacco is one of the elements used in the manufacturing of cigarettes and by itself is not very addictive. Tobacco however contains nicotine. Nicotine is considered to be a gateway drug which is highly addictive and found in all tobacco products and is also responsible for the pleasurable qualities of smoking tobacco. Tobacco addiction therefore refers to nicotine addiction. The high incidence of tobacco abuse can be attributed to the fact that tobacco use is a socially acceptable practice and thus enables individuals to use tobacco in almost any setting without social sanctions or breaking the law. (Barlow & Durand, 2012) (Hanson, Venturelli, & Fleckenstein, 2014)

3.2.2 Cocaine

Cocaine is derived from the leaves of the coca plant which is indigenous to South America. Cocaine can be used in a variety of ways including injecting it into the bloodstream, swallowed or the most popular way is to cut it up and then sniff it up. A high is experienced within half an hour of ingestion and lasts for anything from one to three hours. Cocaine has been found to ward off hunger, sleep and fatigue. Cocaine use in South Africa has increased by roughly 20% in a two year period and can mainly be attributed to a decrease in its price. Currently South Africans consume more than R1 430 million worth of cocaine each year. (Barlow & Durand, 2012) (SA Statistics, n.d.)

3.3 Hallucinogens

Substances which fall into this category influences the fragile inner workings of the user's brain producing an intense alteration of perceptions, thoughts and feelings. These substances thus distorts reality, thinking and changes the way in which the user perceives the world. The user's sight, sound, feelings, smell and taste senses are distorted in dramatic fashion. (Barlow & Durand, 2012) (Hanson, Venturelli, & Fleckenstein, 2014) The reality as experienced by hallucinogen users differ drastically from that of ordinary consciousness. These substances pose a great risk for the individual as tolerance develops rapidly with the result that higher doses are needed each time in order to obtain similar effects. (Barlow & Durand, 2012) (Hanson, Venturelli, & Fleckenstein, 2014)

3.3.1 Dagga

Dagga was the drug of choice during the 1960's and early 1970's but its popularity decreased. In South Africa dagga usage however increased with 20% making it the most used illicit substance with 3.2 million users recorded in 2008. South Africans consume double the amount of dagga than the average world-wide figure which amounts to a massive 1500 metric tons of dagga and add up to a staggering estimated expenditure of R3560 million per year. (SA Statistics, n.d.) (Barlow & Durand, 2012) Dagga consists of the leaves, flowers and seeds of the Cannabis sativa plant, these plant parts are dried and then sold in different quantities ranging from a single dose to a brick-sized block. The most common means of usage is through smoking dagga in the same fashion as one would smoke tobacco products, other means include drinking it as tea or adding it to cookie or brownie batter. Dagga affects ones mood as well as your perception of the world and reality. (Hanson, Venturelli, & Fleckenstein, 2014)

4. Substance Use Disorders and its Effect on the Individual, the Family and Society

It is said that substance abuse negatively impacts the physical, social, spiritual and mental wellbeing of the individual as well as his or her society. (Williams, 2014)

4.1 Alcohol

As noted throughout the document, alcohol is the most used substance in South Africa and it is believed that 17.5 million South Africans are affected through alcohol.

4.1.1 The Effect of Alcohol Abuse Disorders on the Individual

Alcohol abuse has been found to have dire effects on different aspects of the individual and his or her functioning. Some of the effects associated with alcohol abuse include the following.

4.1.1.1 Alcohol Intoxication

Once alcohol is ingested the initial experience is that of stimulation and a feeling of well-being is experienced which can be attributed to the slowing down of the inhibiting centres of the brain, this accounts for the out-going nature of those under the influence of alcohol. As more and more alcohol is consumed, more and more areas of the brain is depressed which results in an inability to function properly. Motor coordination becomes impaired and therefore those under the influence of alcohol stagger and show slurred speech, their time to react is also drastically slowed, individuals under the influence of alcohol become confused and have a reduced ability to make judgements. Thus it is clear that alcohol intoxication has a negative effect on the individual and it is therefore prohibited by law to drive under the influence of alcohol. (Barlow & Durand, 2012)

4.1.1.2 Effects of Alcohol on the Body

The inhibitory neurotransmitter GABA is negatively affected by alcohol use due to the fact that it reinforces the movement of chloride ions which makes it difficult for neurons to fire thereby making it difficult for neurons to communicate with each other. This can also offer an explanation to alcohol's anti-anxiety properties due to the fact that GABA is associated with feelings of anxiety. (Barlow & Durand, 2012)

The glutamate system is yet another system which is negatively affected by alcohol use. The glutamate system is associated with learning and memory and this is negatively affected by alcohol and may offer an explanation as to why individuals experience blackouts and cannot remember while they are intoxicated. (Barlow & Durand, 2012)

Whether or not alcohol will affect organic matter is dependent on genetic vulnerability, frequency of use, the duration of drinking binges, blood alcohol levels maintained during the period of alcohol use and whether or not the body was given adequate time to recover between binges. The possible organic damage attributed to long-term alcohol use include liver disease, pancreatitis, gastrointestinal tract cancer, lowers the immune system's resistance to disease, cardiovascular disorders as well as brain damage.(Barlow & Durand, 2012) (Goldberg, 2013)

4.1.1.3 Effect of Alcohol on Personal Safety

The study conducted by the CDA has found that women who are dependent on substances are 46% more vulnerable to fall victim to rape and physical abuse, such women are also more likely to fall victim to incest. (Substance Use and Abuse in South Africa: Central Drug Authority Briefing, 2011) Various studies also found that in two-thirds of all homicides the victim, assailant or both were under the influence of alcohol. Due to the fact that alcohol negatively affects one's cognitive functioning it increases the chances of engaging in activities which are potentially harmful to the physical well-being of the individual such as fights. (Goldberg, 2013) (Barlow & Durand, 2012)

4.1.2 The Effect of Alcohol Abuse on the Family

Alcohol negatively affects families financially and in a variety of other ways as well. Some of these are discussed below.

4.1.2.1 Foetal Alcohol Syndrome (FAS)

South Africa has the highest recorded prevalence of FAS in the world (Williams, 2014). FAS is caused by maternal alcohol abuse during pregnancy and has dire consequences for the child. The problems which are associated with FAS include foetal growth retardation, cognitive deficits, learning difficulties and often children with FAS have characteristic facial features such as grooves between the nose and upper lip, small head circumference and small eye openings. (Goldberg, 2013)

4.1.2.2 Domestic Violence and Child Abuse

Various sources support the notion that a relationship exists between alcohol abuse and domestic violence and child abuse. Domestic violence in which the wife is battered is more prevalent than the husband falling victim to abuse. The probability of violence is directly dependent on the amount and frequency of alcohol use and therefore the more frequent and higher volumes of alcohol consumed the higher the probability exists for violence to occur. (Goldberg, 2013) (Barlow & Durand, 2012)

4.1.2.3 Children of Alcoholics

Children of parents whom abuse alcohol carry an unnecessary burden and due to shame and unpredictability of having an alcoholic parent they have little or no friends. Problems commonly observed in children of alcoholics include sleep disturbances, depression, loneliness as well as stomach problems; such children are also very likely to be alienated from their parents and have poor communication skills and less trust than children from normal households. (Goldberg, 2013) Children from homes where alcohol is abused exhibit problem behaviours such as lying, suppression of feelings as well social withdrawal; they also frequently show anger towards those who do not drink for not providing them with support and protection. The negative effects of alcoholic parents continue well into adulthood as adult children has difficulties giving and receiving love, they devalue themselves and are easily depressed, handle authority poorly and go to great extents to hide the drinking problem of a family. (Goldberg, 2013) In South Africa an increase in child-headed households is observed. (Substance Use and Abuse in South Africa: Central Drug Authority Briefing, 2011)

4.1.2.4 Suicide

As much as 7% of alcoholics commit suicide, suicide ideation and attempts are however much higher. It is supported by evidence that female alcoholics are more likely to commit suicide than their male counterparts. (Goldberg, 2013) The high incidence of suicide, and suicide attempts under individuals whom abuse alcohol have dire consequences to their families. If the suicide attempt succeeded the child is left in a single-parent environment, possibly with a single parent whom is most likely also an alcoholic.

4.1.3 The Effect of Alcohol Abuse on the Society

Alcohol abuse can negatively affect society on an array of areas.

4.1.3.1 Motor Accidents

In South Africa, driving under the influence accounts for nearly half of all the motor accidents with an estimated death toll of 7 000 individuals (SA Statistics, n.d.). The reason for this is that the drivers reaction time and processing time is slower than normal, those driving under the influence is also likely to only look at the centre of their visual fields and thereby do not utilise their peripheral vision, drivers driving under the influence cannot effectively attend to multiple sources of information. It is however not just those driving under the influence which is responsible for this high incidence as pedestrians whom walk under the influence of alcohol also account for a large proportion of motor accidents. (Goldberg, 2013)

4.2 Dagga

Statistics show that in the year 2008 there were 3.2 million dagga users in South Africa (SA Statistics, n.d.), a figure which might have doubled in the six years that passed.

4.2.1 The Effect of Dagga Abuse Disorders on the Individual

4.2.1.1 Dagga Intoxication

The recent use of dagga brings about observable maladaptive behaviour or psychological changes in the individual which includes euphoria, anxiety, impaired judgment and social withdrawal. Other symptoms which the user may experience after the use of dagga include having a dry mouth, tachycardia, an increased appetite as well as conjunctival injection. (Barlow & Durand, 2012)

4.2.1.2 Impairs Memory, Concentration and Interpersonal Relationships

Due to the fact that individuals who abuse dagga also other drugs it is difficult to accurately determine the effect of dagga on the human body. It is however believed that dagga usage decreases the levels of acetylcholine within the hippocampus, this leads to the impairment of memory, concentration and interpersonal relationships. Due to the fact that one's memory, concentration and social skills become impaired it is indisputable that one's academic performance will be negatively influenced, in adult users it may even lead to loss of employment. (Goldberg, 2013) (Barlow & Durand, 2012)

4.2.1.3 Influences Mood and Physical Coordination

Dagga also influences the mood of the user due to the fact that dagga has a negative influence on the activity of the neurotransmitters norepinephrine and dopamine which is responsible for the regulation of moods. Dagga use also predisposes the user to engage in sexual acts at a younger age, risky sexual behaviour is however not likely to take place. (Goldberg, 2013) (Barlow & Durand, 2012) An impairment in physical coordination is also observed in some individuals (Hanson, Venturelli, & Fleckenstein, 2014)

4.2.1.4 Causes Cancer

Smoking marijuana releases the same cancer causing agents as when one smokes tobacco thus long-term smoking of marijuana may lead to the same diseases associated with the use of tobacco, this include lung and other types of cancer (Barlow & Durand, 2012).

4.2.1.5 Negatively Affects the Male and Female Reproductive Systems

The male and female reproductive systems are also negatively affected by dagga use. The use of dagga by females inhibits ovulation. In males dagga use has been found to negatively affect the testosterone levels, sperm count and libido of the user. It is however shown by some research that dagga can be used to counteract erectile dysfunction and to also slow down the progression of prostate cancer. Overall the use of dagga has a negative effect on the individual and should therefore be avoided. (Goldberg, 2013)

4.2.2 The Effect of Dagga Abuse Disorders on the Family

4.2.2.1 Childless Families

It is noted that the use of dagga by pregnant women increases the risk for both miscarriages and ectopic (when the embryo attaches to the walls of the fallopian tubes) pregnancies. This along with the effects it has on the reproductive systems of males and females it can be concluded that dagga use inhibits reproduction and therefore leads to childless families. (Goldberg, 2013)

4.2.2.2 Unemployment and Financial Difficulties

Due to the fact that the use of dagga negatively affects one's memory and concentration it can be said that it is unlikely for a teenage user to finish school and therefore faces a future of unemployment. The other scenario is that adult users whom are employed may be fired due to their inability to concentrate and remember, their deteriorated relationships skills as well as their impairment in physical coordination. Unemployment relates to a loss of income. Without an income there is no means of caring for a family and therefore the family will face financial difficulties. To worsen this issue is the fact that R3560 million is spent each year by South Africans to fuel their dagga abuse habits, therefore it is most likely that the abuser will begin to sell off the family's possessions in order to attain dagga. (Goldberg, 2013) (SA Statistics, n.d.)

4.2.3 The Effect of Dagga Abuse Disorders on the Society

4.2.3.1 Increase in Drug Related Crimes

Due to the fact that unemployment is the most reasonable outcome for dagga abusers which translates to the lack of funds to fund the habit one can expect to observe an increase in the prevalence of drug related crimes. These crimes can include anything from common theft to armed robbery, these criminal activities are engaged in, in order to get the required funds for the acquisition of the merchandise. (SA Statistics, n.d.)

4.2.3.2 Impaired Physical Coordination

The impairment in physical coordination is especially hazardous when the individual attempts to drive a car, operate machinery or attempt to perform any activity which requires coordination, good reflexes and quick judgment. Dagga also affects one's perception abilities thereby making it impossible for an individual whom is under the influence to judge the speed of an oncoming vehicle or to judge distance. This greatly increases the chances of accidents taking place and therefore it is evident that many of the vehicle and pedestrian accidents which takes place in South Africa can also be attributed to dagga abuse. (Hanson, Venturelli, & Fleckenstein, 2014)

4.3 Tobacco

4.3.1 The Effect of Tobacco Abuse Disorders on the Individual

4.3.1.1 The Effect of Nicotine on the Body

In some cases it has been found that nicotine can be linked to an elevated heart rate, high blood pressure and to increase the chances of contracting heart diseases as the heart needs to work harder to move the oxygen depleted blood through the body in order to ensure that enough oxygen is received by the various organs and cancer. In higher doses nicotine has been found to blur vision, cause confusion, lead to convulsions and in extreme cases it may even lead to death. (Barlow & Durand, 2012) According to the Cancer Association of South Africa 25 000 people die each year due to smoking-related illnesses (SA Statistics, n.d.). (Goldberg, 2013)

4.3.1.2 The Effect of Nicotine on Affect

It has been found through various studies that there is a bidirectional relationship between smoking tobacco and negative affect. The researchers found that using nicotine greatly increases the likelihood of negative affect such as depression, anxiety and anger. It was also found that negative affect greatly increases the likelihood of becoming dependent on nicotine from smoking tobacco. Nicotine dependence has also been linked to low self-esteem. (Barlow & Durand, 2012) (Goldberg, 2013)

4.3.2 The Effect of Tobacco Abuse Disorders on the Family

4.3.2.1 The Effect of Tobacco on Children

It has been found that nicotine negatively affects the foetal brain. Women who smoke while they are pregnant or inhale the second-hand smoke of others during her pregnancy run the risk of having a premature baby as well as babies whom are born with a low birth weight, such children also run the risk to become smokers later on in life. Children whom are exposed to the second-hand smoke of their parents have an increased likelihood of suffering from ear infections, frequent and severe asthma attacks as well as sudden infant death syndrome. (Hanson, Venturelli, & Fleckenstein, 2014) (Goldberg, 2013) (Barlow & Durand, 2012)

4.3.2.2 The Effect of Second-Hand Smoke on a Spouse

The spouse of an individual whom smokes nearby the non-smoker runs the risk of inhaling second-hand smoke which can be detrimental to the health of the non-smoking spouse due to the fact that he or she is exposed to a large number of toxins and carcinogens. Such an individual is likely to contract cardiovascular diseases as well as respiratory problems such as asthma and lung cancer. (Hanson, Venturelli, & Fleckenstein, 2014)

4.3.2.3 Financial Burden on the Family

Smoking is quite an expensive addiction and with the difficult times currently in South Africa with the ever increasing fuel prices, food prices, inflation and sin taxes it won't become any cheaper to smoke. It is estimated that if an individual smokes one pack of cigarettes a day that his monthly expenses on cigarettes will account to nearly a R1000. Life insurance policies are also taxed if an individual is a smoker due to the increased risk of death. Therefore it is clear that smoking places an unnecessary financial burden on families. It must also be taken into consideration that the death of a breadwinner due to tobacco related illnesses may also have a negative effect on the financial position of the family.

4.3.3 The Effect of Tobacco Abuse Disorders on the Society

4.3.3.1 Second-Hand Smoke

Second-hand smoke is a mixture of the smoke released by the tip of the cigarette as well as the smoke which is exhaled by a smoker and is made up of hundreds of different chemicals of which roughly 70 are known cancer causing chemicals. Due to this, exposure to second-hand smoke may be detrimental to the health of the society. It has been found by various studies that the inhalation of second-hand smoke may lead to cardiovascular system illnesses and significant respiratory problems such as lung cancer. It also increases the chances of low birth weight babies in women exposed to second-hand smoke. (Hanson, Venturelli, & Fleckenstein, 2014)

4.3.3.2 Affects the Economy

It is estimated that 2.5 million workdays are lost in South Africa each year due to tobacco-related illnesses (SA Statistics, n.d.). This does not take into consideration the time lost due to frequent smoke breaks taken by employees in order to keep the concentration of nicotine in their bloodstream at a constant level throughout the day. Due to the loss of workdays production and other work activities comes to a standstill which translates into a loss of income which in turn has a negative impact on the economy of South Africa which in turn negatively affects inflation which makes the cost of living so much more for all the citizens of South Africa.

4.4 Glue

Even though glue inhalation is mostly found under children whom sniff it in order to stay warm and make their tummies feel full (Substance Use and Abuse in South Africa: Central Drug Authority Briefing, 2011) several effects of glue inhalation can be observed.

4.4.1 The Effect of Glue Abuse Disorders on the Individual

4.4.1.1 The effect of Glue on the Body

The high one experiences from inhaling glue is closely associated with alcohol intoxication. Once glue is ingested the initial experience is that of stimulation and a feeling of well-being is experienced which can be attributed to the slowing down of the inhibiting centres of the brain. As more and more glue is inhaled, more and more areas of the brain is depressed which results in an inability to function properly. (Barlow & Durand, 2012)

Motor coordination becomes impaired and therefore those under the influence of glue may stagger and show slurred speech, their time to react is also drastically slowed, individuals under the influence become confused and have a reduced ability to make judgements. Thus it is clear that inhaling glue has a negative effect on the individual. (Barlow & Durand, 2012) It has also been observed that the long-term use of glue can damage the bone marrow, kidneys, liver and the brain of the user. It has also been found that using glue increases both aggressive and anti-social behaviour. (Barlow & Durand, 2012)

4.4.2 The Effect of Glue Abuse Disorders on the Family

4.4.2.1 Loss of Income

Due to the fact that glue inhalation is closely associated with alcohol intoxication it can be said that the user will experience an impairment in physical coordination. Due to the fact that his or her physical coordination is impaired one can conclude that it will be especially hazardous for the individual to drive a car, operate machinery or attempt to perform any activity which requires coordination, good reflexes and quick judgment. It can also be said that the perception abilities have been negatively affected thereby making it impossible for an individual whom is under the influence to judge the speed of an oncoming vehicle or to judge distance. (Hanson, Venturelli, & Fleckenstein, 2014) (Barlow & Durand, 2012) (Goldberg, 2013) Therefore it is clear that the effect of glue inhalation on the family will be loss of income due to the fact that the individual will be unable to function properly due to his or her altered state of mind and decreased physical coordination and will therefore become unemployed or will not be able to secure employment. Income can also be lost when the breadwinner dies due to damage to his or her bone marrow, kidneys, liver and brain.

4.4.2.2 Domestic Violence

Due to the fact that glue has been linked to an increase in aggression and anti-social behaviour it can be concluded that households where glue is abused will have a higher prevalence of domestic violence. (Barlow & Durand, 2012)

4.4.3 The Effect of Glue Abuse on the Society

4.4.3.1 Loss of Productivity

Due to the loss of physical coordination and perceptual abilities of glue users it can be said that a loss of productivity will be observed due to the fact that these individuals will no longer be able to operate machinery or perform duties which require coordination, good reflexes and quick judgment. (Goldberg, 2013)

4.4.3.2 Motor Accidents

Due to the fact the individual will experience a decline in his or her physical coordination and perceptual abilities it can be concluded that a number of motor accidents can be attributed to driving under the influence of glue. (Barlow & Durand, 2012)

4.4.3.3 Increase in Aggressive and Anti-Social Behaviours

Due to the fact that glue makes an individual more aggressive and anti-social it can be said that glue abuse attributes to the number of violence related crimes in South Africa. (Barlow & Durand, 2012)

4.5 Cocaine

4.5.1 The Effect of Cocaine Abuse Disorders on the Individual

4.5.1.1 The Effect of Cocaine Intoxication on the Body

Individuals whom uses cocaine repeatedly and at increasing higher doses may experience restlessness, increased irritability, panic attacks, paranoia and in extreme cases full-blown psychosis in which the users sense of reality is lost and begins to experience auditory hallucinations. (Goldberg, 2013) (Barlow & Durand, 2012)

Due to the fact that cocaine can be administered in a variety of fashions various negative effects on the body can be experienced. Snorting cocaine may lead to a loss of smell, nose bleeding, hoarseness, difficulty swallowing and a chronically inflamed runny nose due to the irritation of the nasal septum. When cocaine is ingested severe bowel gangrene may set in due to the reduced blood flow to the bowels. It is also noted that chronic users show significant weight loss and malnourishment due to the loss of appetite. Injecting cocaine into the arms may lead to puncture marks, allergic reactions to the drug itself or additives may also be experienced and may even in some cases lead to the death of the user. (Goldberg, 2013) (Barlow & Durand, 2012)

It has also been found that cocaine is detrimental to the cardiovascular system due to the fact that cocaine leads to a significant rise in the user's heart rate and blood pressure. Cocaine is also said to be a vasoconstrictor as it deprives the heart from necessary blood thereby causing further damage to the heart. (Goldberg, 2013) (Barlow & Durand, 2012)

4.5.1.2 Increases Risky Behaviour

It has been found by various researchers that drug abuse and intoxication inhibits the judgment and decision making capacities of the individual which increases their chances of engaging in risky behaviour. Risky behaviour may refer to risky sexual encounters, sharing of needles as well as male and female prostitution in order to attain funds for the next fix or to pay of incurred debt. These risky behaviours leads to diseases such as HIV/AIDS and hepatitis B and C. (Goldberg, 2013) (Hanson, Venturelli, & Fleckenstein, 2014)

4.5.2 The Effect of Cocaine Abuse Disorders on the Family

4.5.2.1 Financial Difficulties

It has been mentioned that annually R1 430 million is spent by South Africans to fund their cocaine addiction. Based on the dire consequences of cocaine on the human body it can be said that those who abuse cocaine cannot work and therefore no income can be generated. Therefore other means, such as prostitution and crime, of obtaining funds are engaged in, in order to acquire the next fix. (SA Statistics, n.d.)

4.5.2.2 Disrupted Households

Due to the fact that other substances are abused alongside cocaine and the loss of judgment and decision making capabilities households are disrupted. Parents are unable to maintain control over the household and their negative behaviour creates a poor family environment. It must also be said that the risky behaviour of a cocaine using spouse may negatively affect the non-using spouse due to the fact that the contracted diseases will be spread to them as well. (Barlow & Durand, 2012)

4.5.2.3 The Effect of Cocaine on the Foetus

It is difficult to determine the full extent cocaine abuse during pregnancy has on the developing foetus as other substances such as nicotine and alcohol is abused alongside cocaine. It is however believed that babies who were exposed to cocaine during pregnancy are more irritable at birth and have long bouts of high-pitched crying. It is also believed that such babies have permanent brain damage, new evidence however shows that the effects is not as severe. It is however supported by studies that such babies are born with lower birth weights, lower head circumference and an increased risk for behavioural problems. (Barlow & Durand, 2012)

4.5.3 The Effect of Cocaine Abuse Disorders on the Society

4.5.3.1 Spreading of Diseases

Due to the fact that the judgment and decision making capacities of individuals are negatively affected by cocaine intoxication it is clear that decisions which is detrimental to the self and others will be made. Risky sexual encounters, prostitution and needle sharing contributes to the rapid spread of HIV/AIDS, STDS and hepatitis B and C amongst cocaine users. Prostitution also opens the possibility that non-users contract these diseases as many affluent individuals make use of prostitutes to fulfil their sexual desires. (Goldberg, 2013) (Hanson, Venturelli, & Fleckenstein, 2014)

4.5.3.2 Burden to Society

Due to the fact that these individuals spend thousands each month to fund their addiction there is no money left to afford a medical scheme and therefore these individuals make use of the public health sector which is funded by taxes. The supplying of ARV's and other medications to these individuals places a substantial burden on the country and its citizens. The second burden these individuals creates is the increase in criminal activities as they need to get money somewhere in order to fund their addictions, the most likely source of funding will be criminal activities such as robbery.

5. The Status of Intervention Programs in South Africa

The current measures implemented to address substance abuse in South Africa is failing. One of the main means of addressing substance abuse in South Africa is through reducing the supply by means of police involvement in taking down drug smuggling syndicates (Gonzalez, 2013). Another means of addressing the substance abuse issue in South Africa is through the use of treatment centres which focuses on rehabilitating addicts. It must however be noted that the 80 centres in South Africa can only serve 20 000 addicts a year whereas the demand is anywhere between 180 000 to 300 000 per year (Substance Use and Abuse in South Africa: Central Drug Authority Briefing, 2011) Even though it was decided and approved by government in its Prevention of and Treatment for Substance Abuse Act of 2008 to build more rehabilitation centres and halfway houses to fight substance abuse that only one centre has been built but is not operating as no staff have been appointed (Gonzalez, 2013). The other issue with rehabilitation is the low success rate as only 3% of those admitted are successfully rehabilitated (SA Statistics, n.d.).

6. Conclusion

It is evident that South Africa faces major difficulties in more than one area of life, especially when it comes to substance abuse. People are more and more stressed in South Africa due to the poor economic growth and ever increasing cost of living, all of which are factors increasing the likelihood of an individual abusing substances. Substance abuse furthermore places a considerable financial burden on the individual, his or her family as well as the society and as the situation in South Africa worsens this burden will become heavier. Drug related crimes will therefore also soar into new heights as addicts will need to get funds to feed their addictions. The sad truth is that corruption within the government saw to it that the money set aside for the building of rehabilitation centres and halfway houses vanished leaving South Africans without adequate help. At the moment we are fighting a losing battle as we need to fight against the drug lords as well as corrupt government officials. There is hope however that with the right people the tides can be turned and substance abuse be beaten. Only time will tell.

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