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HIV risk behaviours among taxi drivers in Durban, South Africa

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HIV Risk Behaviours Among Taxi Drivers in Durban, South Africa



By Thasmiri Singh

A dissertation submitted to the Faculty of Humanities in partial fulfilment of the requirements of the degree of

Master of Arts Organisational Psychology

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DECLARATION

A research project submitted in partial fulfilment of the requirements for the degree MA by coursework and Research Report in the field of Organisational Psychology in the Faculty of Humanities, University of the Witwatersrand, Johannesburg, 20 June 2020.

I declare that this research report is my own, unaided work. It has not been submitted before for any other degree or examination at this point or any other university

_____T Singh_____

Thasmiri Singh

____15 July 2020_____

Date

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ABSTRACT

The aim of the study was to assess associations of HIV risk, psychological distress, alcohol use disorder and posttraumatic stress disorder among taxi drivers in Durban. The study was conducted in Durban. There were 130 participants. There were 125 males and 5 females. The research design of the study was cross-sectional. The instruments used to collect data were HIV risk scale, Kessler psychological distress scale, alcohol use disorders identification test and posttraumatic stress disorder symptom scale. The procedure involved invitation of participants to voluntarily participate in the study and complete four questionnaires. IBM SPSS Version 26 was used to analyse data. Correlations and multiple regression were performed to establish the relationship between HIV as a dependent variable and psychological distress, alcohol use disorder and posttraumatic stress disorder as predictor variables. The results showed a statistically significant relationship between psychological distress and HIV risk. The findings of the study provide an insight into the need for interventions to decrease HIV in the workplace. Directions for future studies could focus on the provision of HIV and AIDS programmes as essential components of workplace wellness programmes in the transport industry.

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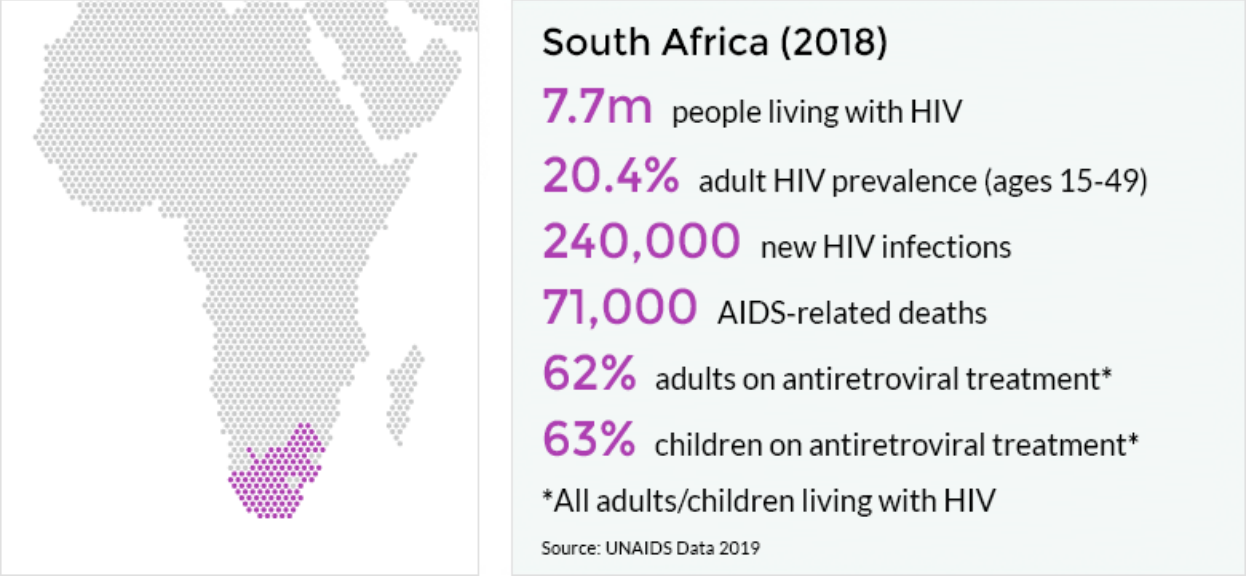
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CHAPTER ONE - BACKGROUND TO THE STUDY

High HIV prevalence in South Africa is a crisis that has implications for many aspects of life and the sustainable development of organisations. Employees in the transport industry constitute a work population that is affected by HIV and AIDS. The epidemic affects their social relations and social networks in the workplace. The transport industry has high mobility of employees as employees move goods and passengers and provide related services across the geographical spectrum locally and regionally. Despite the availability of multiple HIV and AIDS prevention programmes, South Africa is still one of the countries with the highest number of people living with HIV in the world. Statistics show that KwaZulu-Natal Province has the highest HIV prevalence in South Africa. According to a population survey, it was shown that 7.7 million South Africans across the country are infected with HIV and the highest prevalence of HIV was found in and around the province of KwaZulu-Natal, approximately 27% of South Africans in KwaZulu-Natal and its surrounding region are living with HIV ("HIV statistics for South Africa | Prevalence, incidence, ARVs", 2019).

HIV AND AIDS IN SOUTH AFRICA



("AIDSinfo | UNAIDS", 2019)

HIV prevalence and HIV incidence is at its highest in sub-Saharan Africa and organisations in Africa operate under immense pressure due to deteriorating employee health and attrition

(Steenkamp, Von der Marwitz, Baasner-Weihs & Pietersen, 2015). It is important to note that HIV does not only affect the wellbeing of an individual but affects a broader society and the world as a whole. Once an individual is infected with HIV, it affects their physical wellbeing and goes beyond to affect an individual's financial and social wellbeing. It is shown that the province of KwaZulu-Natal reports higher rates of sexually transmitted infections (STIs) as compared to other provinces in South Africa. The high rate of sexually transmitted infections hampers health service delivery in the province. Health services in KwaZulu Natal Province are not adequate as the province has an unequal distribution of health care services between suburban and rural communities (Kharsany, Cawood, Khanyile, Lewis, Grobler, Puren, Govender, George, Beckett, Samsunder, Maduri, Toledo, Chipeta, Glenshaw, Hersey & Abdool Karim, 2018**).**

The burden of disease as a result of HIV and sexually transmitted infections causes a deterioration of health services and puts a strain on the provincial health department`s ability to provide efficient reproductive health care services (Delany-Moretlwe, Bello, Kinross, Oliff, Chersich, Kleinschmidt & Rees, 2013). The inability to provide adequate health care services in South Africa could be due to economic, social and political factors. A change in political leadership could result in policy shift thus affecting service delivery. In this context, taxi drivers as a mobile group, are prone to HIV as research shows a link between HIV susceptibility and spatial mobility (Camlin, Cassels & Seeley, 2018). The taxi industry in South Africa is a field that is predominantly male, and this male dominance could lead to unequal gender relations between passengers and taxi drivers. The larger proportion of male taxi drivers as compared to female drivers could be associated with male dominance and unequal power relations in the transport industry. Patriarchy in South Africa poses a health risk among female commuters as there are numerous stories in the media about gender-based violence in the transport sector. Gender stereotypes are commonplace in the transport industry and the working conditions of taxi drivers promote masculine tendencies among female and male taxi drivers. Masculinity is associated with male entitlement and cultural stigma against females. In a work context, negative beliefs about women and their ability is likely to affect the wellbeing of female taxi drivers and commuters (Johnson, Dorrington & Moolla, 2017).

Taxi drivers are susceptible to HIV infection as mobile groups are at risk of having many sexual partners. It is noted that taxi drivers spend long hours on South African roads and they are

exposed to many high risk social networks and they are at risk of alcohol and drug abuse (Adedokun, Goon, Owolabi, Adeniyi & Ajayi, 2019). Taxi drivers with multiple sexual partners would be at risk of contracting HIV as concurrent sexual relationships is a risk factor in HIV prevention in South Africa. Research shows that there is a rampant spread of HIV in the transport sector in South Africa (Pettifor, Measham, Rees & Padian, 2004).

Being employed as a taxi driver has certain personal risks that employers have to address. There is violence on South African roads that exposes drivers to personal injury. HIV has an impact on all sectors of the economy, and this has a large impact on South Africa's gross domestic product. HIV has an attritional effect on the South African workforce. Working as a taxi driver is emotionally exhausting and physically demanding as taxi drivers work long hours and the work gets tougher on public holidays when the number of travellers increases. Due to stressful and depressing situations, some of the taxi drivers could engage in behaviours that could be harmful to their safety or health. Some of the drivers could be promiscuous and they become vulnerable to HIV infection (Nyirenda, Chatterji, Rochat, Mutevedzi & Newell, 2013).

Many of the HIV interventions and training programmes in South Africa have been labelled as adopting a "one size fits all" approach and it does not target specific populations which have different cultures, values and life choices. The result of the "one size fits all" approach is that specific needs of target populations are not addressed, hence, HIV is continuing to spread instead of being curtailed (Kimuna & Djamba, 2012). This also affects the economic wellbeing of South Africa and there is a need for appropriate education and health care programmes to alleviate the detrimental effects of AIDS in the workplace. The minibus taxi industry is vastly increasing in South Africa and with increasing industry comes increased employees. The spatial mobility of taxi drivers within a city and between cities and towns makes them vulnerable to HIV as they create risk sexual relationships in various places they ply their trade (Kimuna & Djamba, 2012).

In the context of South Africa, companies, non-governmental organisations, and the public sector participate in some wellness programmes for employees in the transport industry mainly focusing on the well-being of drivers and related employees in the transportation sector. Corporate wellness programmes are essential for educating employees in this sector on the importance of engaging in healthy and safe behaviours to ensure safety and wellbeing of taxi drivers as employees. HIV makes drivers unwell if not treated and unwell drivers could pose an

accident risk to members of the public who use public transport (Pettifor, Measham, Rees & Padian, 2004). HIV risk behaviours shown by taxi drivers such as alcohol abuse, sexual harassment, intimate partner violence and having multiple sexual partners including sex workers should form part of the health education and wellness programmes in the minibus taxi industry (Kimuna & Djamba, 2012).

The transport industry has operators who own the business individually or as a family business. This implies that some operators might seek to maximise profit without due regard to the health or welfare of drivers in terms of providing HIV prevention services as what large companies do. In South Africa, research shows that in some instances taxi drivers are not paid adequately, they are paid a commission without a fixed salary. If they become profit-driven, it means they might not always prioritise passenger safety.

1.1 Rationale for the study:

There are few studies conducted in South Africa on HIV risk behaviour among taxi drivers in Durban. This study focuses on HIV risk behaviour among taxi drivers in Durban. Most of the studies on HIV risk among mobile groups focus on long distance truck drivers hence this study focuses on a group that is barely researched There is a research gap on taxi drivers` psychological wellbeing and HIV risk. Although there is high HIV prevalence in Southern Africa, there is little research that looks at underlying factors that contribute to this crisis, especially among taxi drivers and other public transportation sectors. There is stigma surrounding HIV and being a taxi driver. To an extent, government and other relevant bodies do exercise an emphasis on promoting healthy behaviours through sectoral education programmes on HIV although the efficacy of such interventions needs to be established. This means that HIV interventions created for truck drivers cannot be generalised to taxi drivers; there has to be a sector-specific research to address pertinent risk behaviours in the taxi industry.

This study is relevant to the South African context as HIV mainly affects the youth and mobile groups. Most taxi drivers are young people who are at risk of HIV infection as HIV prevalence in South Africa is highest among the 15-49 age group (Johnson, Dorrington & Moolla, 2017). The transport industry is facing challenges relating to the wellness of drivers who transport people. Some taxi associations and companies in South Africa are working with the Transport Education Training Authority (TETA) to provide HIV and AIDS programmes in the workplace in order to reduce driver attrition in the transport industry (George, Surgey & Gow, 2014). This study adopted two theoretical underpinnings, theory of planned behaviour and theory of reasoned action to focus on psychological wellbeing and HIV risk. The theory of planned behaviour and theory of reasoned action consider beliefs and attitudes of individuals in a health setting. The theories are used to determine the decision-making strategies adopted by individuals in HIV prevention. In this regard, taxi drivers' beliefs and attitudes were used to predict HIV risk.

It is anticipated that the findings of this study could add knowledge to HIV risk behaviours among taxi drivers in the transport industry. The study could be beneficial to taxi operators, policy makers in the transport industry and commuters. It seeks to bring some awareness and insight into the harmful effects of HIV among taxi drivers. The research gap identified in this study is that while most of the studies on HIV risk and spatial mobility have focused more on

international truck drivers, a few studies have focused on commuter drivers or minibus drivers. Taxi drivers in the sub Saharan context have not attracted the attention of researchers as most of them operate as individuals employed by a taxi owner with one taxi or two taxis. Some belong to associations while others operate without affiliation.

There are illegal taxis that operate without licenses and these ply routes that are in remote areas with few traffic inspectors. In some cities, it is reported that taxi drivers are disorderly, rude and that they deliberately flout road rules (Johnson, Dorrington & Moolla, 2017). Consequently, few studies on HIV risk have been conducted among taxi drivers. In particular, there is a paucity of research on HIV risk among taxi drivers in Durban, although there are many HIV prevention clinical trials conducted in Durban. Hence, this study looks to tackle the issues surrounding those employed in the taxi industry in Durban. Taxi drivers are seen as aggressive individuals with limited humanity, this study digs into the issues facing them and the difficulties they face surviving a cutthroat environment.

1.2 Aim of the study

The aim of the study was to assess HIV risk behaviours among taxi drivers in Durban. Taxi drivers operate in environments that are prone to HIV infection.

CHAPTER TWO - LITERATURE REVIEW

HIV prevalence and HIV incidence is highest in sub-Saharan Africa and organisations in Africa operate under immense pressure due to deteriorating employee health and attrition. Considering the effects that Apartheid had on the South African population, HIV prevalence is also associated with some of the policies of apartheid that denied black people enough health care facilities (Steenkamp, Von der Marwitz, Baasner-Weihs & Pietersen, 2015). HIV prevention stems from the choices that individuals make to prevent infection and these choices are sometimes affected by lack of information or less formal education. Some individuals are aware of the risks but choose to be reckless and engage in risk behaviour. HIV risk behaviour could result from a false sense of security, less exposure to HIV mass media communication, lack of knowledge, disregard of partner safety, or belief in myths as preventive of HIV.

In order to improve the state of health services in South Africa, government participates in providing training and development for HIV and AIDS prevention so that children and adults, alike, are informed about the harmful effects of HIV. Companies, non-governmental organisations, and the public sector participate in wellness programmes for employees in the transport industry mainly focusing on the well-being of drivers. This is due to taxi drivers being mobile, therefore, wellness programmes aim to curb the spread of HIV and AIDS. However, these interventions are scarce and there are many taxi drivers in the public transportation sector who have less formal education on disease prevention and safety. Many individuals employed in the taxi industry earn a minimum wage, therefore the lack of vibrant HIV prevention interventions in the industry may result in HIV susceptibility.

The economic impact of HIV is that unhealthy employees are more likely to spent less time at work as some could be absent from work often seeking treatment and those without medical aid would struggle to raise money to access private healthcare services where there are shorter queues.

2.1 HIV defined

HIV, appropriately known as Human Immunodeficiency Virus is a transmittable virus that spreads through specific types of bodily fluid attacking an individual's immune system (Rayment, 2012). The HIV virus can infect anyone at any time, all depending on the method of

contraction. HIV affects an individual's mental, emotional and psychological state. HIV is a virus that destroys the immune system. HIV risk factors include aspects such as places where individuals live, HIV status of sexual partners, having sex without a condom and refusal to be tested for HIV among individuals with multiple sexual partners. (Kimuna & Djamba, 2012).

The risk of contracting HIV is dependent on the type of exposure such as HIV transmission during blood transfusion, sexual intercourse or accidental transmission. According to research in the South African context, Black South Africans as compared to other racial groups are disproportionately affected by the HIV infection, with the youth of South Africa remaining at a significant risk of contracting the disease due to lack of awareness and education (Steenkamp, Von der Marwitz, Baasner-Weihs & Pietersen, 2015). If HIV is not treated, it leads to Acquired Immunodeficiency Syndrome (AIDS). Unlike other diseases and syndromes, the human body is unable to completely get rid of the HIV even with antiretroviral treatment (Rayment, 2012). Antiretroviral therapy reduces the viral load. Employees are encouraged to know their HIV status, whether positive or negative, so that they plan for their health and wellbeing accordingly. In South Africa, HIV infection has a lot of stigma. There are entrenched negative attitudes and beliefs about individuals living with HIV. This form of prejudice results in labelling individuals diagnosed with HIV as socially unacceptable, hence some individuals may shy away from being tested for HIV in fear of being excluded or ridiculed (Rayment, 2012).

This form of stigma and discrimination can affect the emotional state of individuals diagnosed with HIV; this can lead to feelings of shame, isolation and despair. The discrimination is mainly rooted in misconception and lack of HIV prevention education. Approximately 7.52 million South Africans were living with the HIV in 2018 and in 2017 it was estimated that 21% of individuals living with the HIV globally were in South Africa ("AIDSinfo | UNAIDS", 2019).

2.2 HIV in work environments

HIV is a threat to the workforce globally. It is a disease that impedes work productivity. Stigma and discrimination in the workplace affect employees living with HIV. Employees living with HIV become vulnerable to being subjected to undesirable working spaces or being assigned work that segregates them from other employees. They could be assigned demeaning tasks as a way of frustrating them so that they leave the organisations discriminating against them. HIV

stigma against individuals with HIV is associated with labour turnover (Dipeolu, 2014). The Constitution of South Africa is against all forms of discrimination including discrimination based on HIV status. The Employment Equity Act 55 of 1998 stipulates that all employees in South Africa should be treated equally and fairly (Dipeolu, 2014).

Stigma and discrimination against people living with HIV affect job seekers in South African. The lack of adequate workplace interventions for reducing stigma and discrimination against people living with HIV is a challenge in South Africa (Dipeolu, 2014). Stigma and discrimination worsen HIV prevention in South Africa as public health problems would escalate making it difficult for government to provide effective interventions. HIV morbidity among employees contributes to economic decline and low morale among employees. Organisational structures and functioning could be affected in South Africa (VASS, 2005). Research shows that in relation to the South African workforce, HIV is has greatly contributed to the deaths among workers in the 15 to 49 age group ((VASS, 2005). The affected population is comparatively the active population that constitutes the larger proportion of the workforce in South Africa (VASS, 2005).

2.3 HIV Risk Behaviours

Risk behaviour can be described as any behaviour that exposes an individual to HIV infection. The behaviours can be consciously or unconsciously exhibited with the unlikely certainty of the outcome as well as the uncertainty of the possible outcome, opportunity or benefit (Weber, Blais & Betz, 2002). HIV risk behaviours are associated with negative outcomes since the perceived behaviours produce outcomes that compromise an individual's safety, health or ability to prevent HIV. In some contexts, risk behaviours are perceived as displaying socially or culturally acceptable behaviours such as marrying more than one wife or having more than one sexual partner recognized by family members and the extended family. HIV risk behaviour becomes volitional behaviours when an individual engages in practices that make them susceptible to HIV infection. The risk behaviours include drug abuse, drinking and driving or unprotected sex (Weber et al., 2002). The after-effects of risk behavior do not affect the perpetrator only but would have repercussions for other individuals associated with individual. Poor decision-making and bad or risk partner choice at an individual level could result in negative health outcomes and in the case if HIV infection there are long term consequences as HIV is not curable.

The phenomenon of “not me” or “it won’t happen to me” is a myth that makes individuals vulnerable to HIV infection. Myths about HIV have implications for societal health as they misinform and make communities unaware of the long-terms consequences of living with HIV. Society might continue to engage in HIV risk behaviours without taking corrective measures to significantly reduce unsafe sexual practices. A population like employees in the transport industry could continue the trend of showing promiscuous behaviours without considering the consequences to themselves and other involved parties.

HIV prevention involves astute personal decisions, individual assessment of the situation and familiarizing with the presenting risk. Self-awareness about personal vulnerability and lack of controllability of behaviours guides individuals in reducing HIV risk behaviours. When an individual weighs options about engaging in unsafe sexual practices, considerations such as health and safety outcomes, severity of outcomes, moral beliefs, blameworthiness and consequences for work behaviour would take precedence. HIV vulnerability could be as a result of forced sexual acts such as sexual coercion, rape or abusive sexual practices. Under such circumstances, the individual is not responsible for having caused the HIV infection and aftereffects. When an individual is coerced into having sex, medical, social and emotional support should be provided (Weber et al., 2002). In South Africa, HIV prevalence is influenced by various social and environmental situations and sexual practices of the individual (Weber et al., 2002)

A risk factor is commonly known as a variable that tends to be associated with the likelihood of an increase in a disease (Oxford & Kraemer, 2000). Risk factors are associated with the acquisition of a disease (Perkonigg, Kessler, Storz & Wittchen, 2000). Risk exposure ranges from minimal risk to high risk and life threatening (Talbott, 2009). Risk factors in some cases can be subtle and difficult to pinpoint in HIV prevention. Observable risk behaviours and latent risk factors both contribute to HIV infection vulnerability. Both are contributory circumstances that should be targeted by health educators in disease prevention (Kimuna & Djamba, 2012). Since taxi drivers operate in conditions that make them vulnerable to HIV infection, the transport industry should provide HIV prevention programmes that highlight risk factors and equip taxi drivers with life skills that protect them from HIV infection.

In terms of power and personal vulnerability to HIV, research indicates that political influence, reward power, coercive power, social hierarchy and gender power imbalance could make some individuals vulnerable to HIV infection (Wingood & DiClemente, 2000). Taxi drivers could be affected by unbalanced power relations with their employers who might exploit them financially and they might be perpetrators of gender-based violence against female commuters.

In South Africa, taxi drivers are usually rowdy and openly fight for commuters thus forcing commuters to be on taxis they do not like due to fear of violence. The aggression by taxi drivers is a risk factor in gender relations as interpersonal violence is a risk factor in HIV prevention (Bener, Özkan, Yildirim & Jadaan, 2017). Powerless individuals become vulnerable to gender-based crimes. Some economically disadvantaged individuals would engage in transactional sex with taxi drivers to support themselves, families and their children. Transactional sex is associated with HIV infection due to the powerlessness of the receiver of money or gifts (Kilburn, Ranganathan, Stoner, Hughes, MacPhail, Agyei, Gómez-Olivé, Kahn & Pettifor, 2018). It implies that taxi drivers could coerce or give money to vulnerable commuters to have sex with them against their will. Taxi drivers could take advantage of vulnerable commuters in need of transport during peak hours or add hours of the day. Commuters may be persuaded or forced into sexual activities that border on gender-based harm thus making female commuters uncomfortable. In transactional sex, both the passenger and the taxi driver exchange favours thus gaining from undesirable sexual practices. The commuter without money to pay for taxi fares gets a free ride or money and the taxi driver will have unwanted sex with the commuter without being reported to the police for rape. The issue of taking advantage of the situation works both ways regarding taxi drivers and some of the gullible passengers whereby taxi drivers take advantage of passengers and passengers take advantage of the taxi driver and offer sexual activities in return for monetary gain, and vice versa (Kilburn et al., 2018). Both parties become vulnerable to HIV infection since unwanted sex and reckless behaviour are associated with HIV infection (Kilburn et al., 2018).

2.4 HIV prevalence in Durban

The highest prevalence of HIV in South Africa is in KwaZulu-Natal (Kong, 2019). It is most prevalent among age ranges 15 to 49 years old. One of the reasons why HIV prevalence is highest in Durban could be attributed to limited access to the antiretrovirals. According to

research by UNICEF, approximately 34% of people living with HIV in Southern Africa and Eastern Africa and 60% of people living with HIV in Central Africa and West Africa are not on antiretroviral therapy (Pettifor, Measham, Rees & Padian, 2004). In Durban, the lack of access to medical treatment for HIV could stem from the decrease in funding for public health (Thurlow, Gow & George, 2009). In KwaZulu-Natal, Durban is a city with a large mobile population due to the presence of an international harbour. The Durban harbour is one of the busiest ports in Sub-Saharan Africa. There is overcrowding in some places in Durban which contributes to HIV risk. HIV vulnerability in Durban might be associated with sociocultural and economic factors (Pettifor et al., 2004). Durban is characterised as having a population with traditional value systems, hence, there could be aspects of HIV risk behaviours associated with gender inequality and disproportionate power relations between men and women. A study carried out in a Xhosa township focusing on youth found that almost all aspects of a young woman's sexual encounters are controlled by a male (Pettifor, et al., 2004).

In Durban, the transportation industry is large, with taxis being a primary mode of transportation for many commuters due to efficiency, economic status and convenience. The taxi drivers who are tasked with transporting passengers are also known to be a mobile population due to the high number of trips they make per day. These mobile populations are easily exposed to diseases such as HIV (Ncama et al., 2013).

According to a study on the prevalence of HIV amongst the South African workforce it was found that 13% of highly skilled workers are HIV positive, 23% of skilled workers are HIV positive while 33% of unskilled workers are HIV positive (Evian *et al.* 2004; Vass 2005). Hence, unskilled South African workers are more susceptible to HIV than highly skilled and skilled workers in South Africa. It is worth noting that taxi drivers are largely school leavers in the skilled and semi-skilled groups although some fall in the high skilled group for those with tertiary qualification who drive taxis as a personal business venture or work to raise money for a specific purpose before settling in jobs that suit their qualifications. And it is important to note that unskilled and semi-skilled workers in South Africa contribute largely to the economy (Evian *et al.* 2004; Vass 2005). The taxi industry is responsible for 60% of the public commuting services in South Africa and to an extent is seen as one of the backbones of the transportation

industry in this country (Barrett, 2003). In KwaZulu-Natal, the majority of taxi drivers are young males drawn from townships and rural areas.

The taxi industry in South Africa is run by taxi associations and often there are taxi wars involving rival taxi associations. Taxi wars are common and frequent in Durban (Ncama et al., 2013). It is estimated that 60% of taxi drivers and taxi association employees do not earn a fixed amount with regard to their wages (Ncama et al., 2013). Hence, risky behaviours are likely to occur amongst taxi drivers as they tend to always have cash at hand on a daily basis due to collection of taxi fares as well as considering the shorter driving distance they drive to their destinations. They have free time during shifts and during off-peak periods and the relaxation time could be used for alcohol abuse or promiscuity. In South Africa, the taxi industry is characterised by mobility, reckless spending of money among drivers, migration, labour turnover, low levels of literacy, poverty, tough working environments and conditions that are both harmful and stressful (Ncama et al., 2013).

Male taxi drivers who have a higher economic status are considered as “men with money”. Money is considered as a driving force in sexual relations among mobile populations (Kilburn et al., 2018). Money is used a bait to lure women who are economically disadvantaged to engage in risk sexual practices. Sexual partnerships with men who are able to provide financial stability results in transactional sexual relationships (Pettifor et al., 2004).

2.5 Taxi Industry in South Africa

The minibus taxi industry in South Africa is a complex and diverse sector with a rocky history and is characterised as an industry that is cutthroat, consisting of violent encounters between transporters and communities. The minibus taxi industry is also known to involve competition between owners that turns violent due to competition for financial gain and power. Looking at the demographics of the taxi industry in South Africa, there are approximately 185 000 individuals employed within the sector, having different roles (Barrett, 2003). It is estimated that the number of women working within this industry are less than 2 per cent (Barrett, 2003). It is also estimated that, in terms of racial category, there are less than 0.2 per cent white individuals, 5 per cent Indian and Coloured and the remaining 94.8 per cent compromised of Africans (Barrett, 2003). In the taxi industry, taxis are to be registered within the provincial departments,

it is estimated that around 127 000 operating taxis are unregistered (Barrett, 2003). Research shows that the taxi industry is steadily growing and that it is estimated that turnover for this industry is about 11 million rands a day and around 12.6 billion a year (Barrett, 2003).

This industry is popular and the most preferred mode of transport due to the fact that the majority of South African commuters find taxis cheaper and convenient. Research shows that many South Africans that make use of taxi services come from rural communities, particularly poor black communities (Barrett, 2003). The taxi industry is perceived with scepticism since there is corruption and bribery of traffic officers and licensing authorities (Perepjolkina & Reņģe, 2011). Some taxi drivers drive unregistered vehicles and some drive without drivers` licences. It is also known that in some cases, there are taxi drivers who are self-employed drivers, however, the ratio of wage earners to self-employed drivers is unknown.

In South Africa, laws such as the Basic Conditions of Employment Act of 1997 and the Labour Relations Act of 1995 set out standard procedures and conditions which must be followed. The taxi industry in South Africa is governed by The South African National Taxi Council (SANTACO) which is a national organisation of taxi owners. The South African National Taxi Council is a cooperative that conflict and challenges that arise in the industry. The taxi industry makes use of bargaining councils and trade unions in which the employers and employees have representation (Barrett, 2003).

Since the taxi industry is complex, the work causes stress and taxi drivers are known to develop work-related stress and this is due to a combination of stressors and conditions they face in the industry. The taxi driver works under pressure to reach set revenue targets and that could exert immense pressure on the taxi driver. Taxi drivers are tempted to drive at high speeds to get a larger market share. Driving is taken as an informal job hence compromising passenger safety (Pettifor et al., 2004).

Some of the taxi drivers are asked by their employers to pay traffic fines from their wages and self-employed drivers could experience difficulties in repairing their vehicles as repair costs and insurance costs could be unaffordable. The life of a taxi driver is filled with risks, in terms of personal wellbeing as some taxi drivers' work without medical aid or health insurance. Armed robberies and gang violence make it difficult for taxi drivers to operate.

Research shows that in some cases, taxi drivers in South Africa feel trapped due to the pressures they face in the industry from all involved parties. This relates to issues of physical and mental health of individuals working in the taxi industry and the lack of strategy devised to help taxi drivers approach such challenges (Barrett, 2003).

2.6 HIV prevalence in the transportation sector

In terms of economic development in South Africa the transportation sector plays a integral role at both a micro and macro levels. This means that HIV-related deaths hamper economic development in South Africa. Business owners are expected to plan for the costs associated with HIV and AIDS. Transnational drivers find it difficult to access health services in the countries they pass through and stopping on the way might expose them to vehicle hijacking (Delany-Moretlwe, *et al.,* 2013). In some countries, there are mobile clinics that can be accessed by employees who work during odd hours. Mobile HIV clinics are needed in South Africa to cater for truck drivers, delivery truck drivers and taxi drivers.

A study conducted by (Ramjee & Gouws, 2002) showed that mobility influenced the prevalence of HIV among those working in the transportation sector in KwaZulu-Natal (South Africa). It was found that most truck drivers spread HIV due to non-condom use and low safer sexual practices in their interaction with sex workers. It was observed that there was a correlation between high prevalence of HIV and mobility of certain populations including truck drivers in South Africa.

2.7 Mobile populations

Mobile populations are social groups that traverse large areas due to work activities, occupational obligations, and other sociological factors. Mobile populations are geographically spread in areas they have an interest in and they move from place to place in search of opportunities. They are adaptable and versatile to various challenging situations. Mobile groups migrate to new locations and learn various customs and sexual practices in the process which might be different from their own culture or religion (Ramjee & Gouws, 2002). It is the mobile groups that may introduce HIV risk behaviours in communities that originally regarded alien sexual practices as unacceptable. The social integration brings about risk sexual contact. Even though health policies exist, mobile populations are still at risk of being infected with HIV due to

rapid exposure to HIV risk contexts. Mobile groups may face social exclusion, ostracism and some are stigmatised. They are perceived negatively in some communities and revered in others. Fear of social exclusion might force some taxi drivers to be intimate with various sexual partners to seek social acceptance in communities that perceive mobile groups negatively (Tanser, Bärnighausen, Vandormael & Dobra, 2015).

The driver can spend about two weeks or longer on the road without returning home. They go through strenuous border checks that require offloading or repacking some of the goods at border posts. The numerous trips may cause physical and mental exhaustion which may cause long-distance drivers to seek multiple sexual partners. The female partners will provide cooking, washing and other domestic duties while the driver is resting along the way. Female long-distance drivers will seek companion in the same way. The same transactional relationships between taxi-drivers and sex workers are noticeable in large cities such as Durban in South Africa. In South Africa, taxi drivers work long hours and they are more likely to abuse alcohol and drugs after work. Drugs and alcohol impair an individual`s ability to make good judgement about safe sexual practices and substance abuse causes self-harm (Ramjee & Gouws, 2002).

2.8 Stigma and discrimination against taxi drivers

In South Africa, there are alarming levels of stigma and discrimination against commuter taxi drivers. For example, there is a general perception that commuter taxi drivers are semi-literate or violent (Steenkamp, Von der Marwitz, Baasner-Weihs & Pietersen, 2015). Some taxi drivers are retired professionals and work for a basic wage. Taxi drivers are perceived as notorious gangsters and as individuals that are consistently involved in conflict and violence (Strebel, Shefer, Potgieter, Wagner & Shabalala, 2013). It is also perceived that taxi operators, drivers and others that are involved in the taxi industry are violent. The narrative that is perpetuated is about violent taxi wars in South Africa hence the public is rather scornful of the integrity of taxi drivers (Steenkamp, Von der Marwitz, Baasner-Weihs & Pietersen, 2015). The historical context of the transport industry is therefore stigmatised due to many instances whereby the taxi operators and drivers have engaged in violent clashes in cities and residential areas causing commotion, injury or death to commuters (Strebel, Shefer, Potgieter, Wagner & Shabalala, 2013).

2.9 Difficulties experienced by taxi drivers

The taxi industry is fraught with violence, mugging, hijacking, rape, sexual harassment, indecent assault, accidents and taxi drivers witness fatal accidents on the road. Taxi drivers are notorious for causing tragic accidents but they can conversely also be involved in saving lives of passengers involved in accidents caused by other motorists. The exposure to both sides of trauma may result in drivers experiencing posttraumatic stress disorder, stress or secondary traumatisation (Peltzer, 2003). Taxi drivers who are involved in catastrophic accidents resulting in deaths of passengers could experience episodes of depression or suicidal ideation. Owners of taxis may offer medical help to drivers by paying for their hospitalisation but not therapy for mental health restoration. Physiotherapy may be offered to injured drivers but individuals or companies that own taxis hardly consider neurorehabilitation for taxi drivers with traumatic brain injury. As such, psychological distress is associated with HIV vulnerability (Peltzer, 2003).

Taxi drivers are at risk of being attacked by members of the public and they sometimes attack commuters. Cases of robbery in which taxi drivers are victims are commonly reported in South African cities such as Durban (Seedat, Van Niekerk, Jewkes, Suffla & Ratele, 2009). Psychological disorders resulting in emotional disorders such as anger, irritability or shouting at commuters are often reported among taxi drivers. An additional stressor that might contribute to the argument is that taxi drivers are generally underpaid, and they tend to drink heavily. Some of the taxi drivers become promiscuous after drinking alcohol (Seedat et al., 2009). The life of a taxi driver can be daunting and the fear of being killed by robbers or killing passengers in accidents due to a mechanical fault or when fleeing from carjackers could affect their well-being. The scenario on South African roads presents taxi drivers as engaging in behaviours that do not show future planning but surviving for the day and failure to delay gratification (Seedat, Van Niekerk, Jewkes, Suffla & Ratele, 2009).

2.10 Theoretical and conceptual backgrounds:

2.11 Theory of Reasoned Action

Theory of Reasoned Action Theory founded by Martin Fishbein and Icek Ajzen in 1967, is a theoretical framework that is relevant to this study as it is used for predicting an individual's behaviour or intention (Madden, Ellen & Ajzen, 1992). Theory of Reasoned Action is commonly

known to have an assumption which is the best predictor of a specific behaviour is the individual's intention which is usually determined by attitudes, these attitudes are usually determined by the individual's beliefs about the specific consequences that are subjected to the behaviour. This theory also looks to explain an individual's intention with regard to health behaviours, whereby the theory looks into intentions and motivations when participating in certain events such as smoking, substance abuse and health service utilization (Fishbein & Ajzen, 2011). This theory is relevant to the study as taxi drivers are a mobile group prone to HIV infection as research shows a link between HIV susceptibility and spatial mobility (Camlin, Cassels & Seeley, 2018). Hence, attitudes and beliefs of taxi drivers plays a role in the decisions they make facing their HIV risk. Taxi drivers spend long hours on the roads and come across different cultures and norms while on the road, these different belief systems may have an effect on the decisions taxi drivers make while they are exposed to many high risk social net workings.

2.12 Theory of Planned Behaviour

Theory of Planned Behaviour founded by Icek Ajzen in 1985 proposes that human behaviour and intention, with regards to engaging in a specific behaviour. This is relevant to the study as HIV is contracted through specific behaviours, hence, this theory can help establish what those specific behaviours are. Theory of Planned Behaviour also takes into consideration predicting and explaining a wide variety of health behaviours which include and are not limited to substance use, drinking and smoking (Madden, Ellen & Ajzen, 1992). Theory of Planned Behaviour rests on the notion that achieving a behavioural act depends on the individual's motivation and ability. Theory of Planned Behaviour makes use of six key constructs that represents an individual's control over an actual behaviour. The constructs are attitudes, behavioural intention, subjective norms, social norms, perceived power and perceived behavioural control (Madden, Ellen & Ajzen, 1992).

In summary, research has shown that HIV and AIDS is a worldwide crisis that has detrimental effects on an individual's daily life. South Africa has a large population living with HIV and KwaZulu-Natal province has the highest HIV prevalence. The high prevalence of HIV and AIDS in South Africa could be attributed to the political and economic climate that was caused by Apartheid. However, the rate of HIV and AIDS in South Africa is still rising, and this could be attributed to government`s lack of service delivery and low condom uptake. The general public

is vastly affected by the disease; however, some social groups are at a higher risk than others in terms of contracting HIV. This is due to personal factors, social factors, economic factors, political factors and environmental factors. Hence, this theory provides insight into specific and planned decision that an eliminate risk towards infection, promoting disease prevention.

In view of the evaluated literature and purpose of the study, three main hypotheses were presented.

2.13 Hypotheses

1. There is no relationship between HIV risk and psychological distress among taxi drivers.
2. There is no relationship between HIV risk and alcohol use disorder among taxi drivers.
3. There is no relationship between HIV risk and posttraumatic stress disorder among taxi drivers.

CHAPTER THREE - METHODOLOGY

3.1 Research Design:

This study was a quantitative study as data collection was done on a large sample and consisted of data collection by the use of questionnaires. This type of design was chosen to convenience and accessibility. The study was cross-sectional, in which participants were approached within one period in one designated area without further assessment after collection of results. A cross-sectional study design was used as it was found relevant to this study (Sedgwick, 2010). Using a cross-sectional design, the researcher was able to assess HIV risk among one sample of taxi drivers. A cross-sectional study was appropriate as participants were selected based on an inclusion and exclusion criteria set for the study. The inclusion criteria were that the taxi drivers should be able to read and write in English and they were supposed to provide proof that they were taxi drivers operating in the Chatsworth area. Cross-sectional studies are usually conducted for population-based surveys and can be conducted quite fast and they are inexpensive. Cross-sectional studies provide information on what is currently affecting a study population (Sedgwick, 2010). In a cross-sectional study, there is no pre-test and post-test assessment. It is from this perspective that a cross-sectional approach was assumed to gain insight into the HIV risk behaviours of taxi drivers in Durban.

3.2 Participants:

Participants for this study were drawn from Chatsworth in Durban, KwaZulu-Natal, South Africa. Participants for this study consisted of 130 taxi drivers. The age range of participants was 18 to 65 years of age. This sample represents the group of taxi drivers for public transport sector which is diverse (Johnson, Dorrington & Moolla, 2017). Commuter taxi drivers were invited to participate in the study. Both male and female drivers were invited to participate in the study. There is a large group of taxi drivers in Durban. It was not difficult to recruit taxi drivers to participate in the study at Chatsworth Taxi Rank as most of them were eager to participate in the study. There were 120 participants who completed all the questionnaires out of 130 participants took part in the study. Questionnaires that were incomplete were excluded from the study. Males comprised 96% of the study sample and females were 4%. There are more males employed in

the taxi industry as opposed to females in Durban. Most of the participants in this study belonged to the age category of 18 to 65 years old. The mean age of the taxi drivers was 36.22 years old.

The study incorporated a few non-probability sampling techniques such as snowball in which taxi drivers referred the researcher to other taxi drivers to participate in the study. Purposive sampling was also be used to help select participants as participants had to fit specific criteria, namely taxi drivers from the public transportation sector in Durban. This sampling method was incorporated into the study since it was the most convenient way of collecting raw data from the taxi drivers, due to the fact that taxi drivers are always on the road and hardly idle. The targeted population for the sample was relatively small (N=130) and the final sample of 120 taxi drivers included in the study was considered adequate for the study. Using non-probability sampling convenience sampling was appropriate for this study as probability sampling would include a large population that does not fit the inclusion criteria. Non-probability sampling was adopted due to the fact that is has its advantages such as being less time-consuming.

3.3 Instruments

3.3.1 HIV risk scale

HIV risk was measured using a scale developed and used in South Africa (Peltzer, Simbayi, Kalichman, Jooste, Cloete & Mbelle, 2009). The HIV risk scale was developed and validated by Peltzer, Simbayi, Kalichman, Jooste, Cloete and Mbelle (2009). The HIV risk scale has a Cronbach's alpha of 0.64 (Peltzer, Simbayi, Kalichman, Jooste, Cloete & Mbelle, 2009). The questionnaire assesses HIV risk behaviours in various contexts. The instrument has 6 items that is put on a Likert-type scale with 1 indicating disagreeing and 4 strongly agreeing. The questionnaire was put on a Likert-type scale with 1 denoting low risk and 5 high risk. (See appendix A)

3.3.2 Kessler psychological distress scale (K10)

Psychological distress was measured using Kessler Psychological Distress Scale. The instrument has been used in South Africa to assess Psychological distress (Peltzer, 2013). This scale was validated by Peltzer (2013). The Kessler Psychological Distress Scale has an internal reliability

coefficient of α=0.92 (Peltzer, 2013). This is a 10-item test that is put on a Likert-type scale with 1 indicating low distress and 5 high distress (See appendix B)

3.3.3 Alcohol use disorders identification test (AUDIT)

The instrument assessed alcohol consumption, drinking behaviours and alcohol-related problems. The scale was developed by the World Health Organisation (2001) and it has been used in South Africa (Peltzer, 2013). The Alcohol use disorders identification test has a Cronbach's alpha of 0.92, indicating good reliability (Peltzer, 2013). The scale has 10 items that were put on a Likert-type scale with 1 showing low alcohol use and 4 high alcohol use. (See appendix C)

3.3.4 Posttraumatic stress disorder symptom scale (PTSD)

The test measured symptoms of posttraumatic stress disorder. The instrument has 17 items put a Likert-type of scale with 0 representing absence of posttraumatic episodes and 3 high experience of posttraumatic stress disorder. This instrument has been used in South Africa before (McGowan & Kagee, 2013). The posttraumatic stress disorder symptom scale has been found to have high test-retest reliability, high concurrent validity, high internal consistency with a Cronbach's alpha of 0.92 (McGowan & Kagee, 2013). (See appendix D)

3.4 Procedure

Ethics clearance was sought from the University of the Witwatersrand before the study began. Participants were approached as individuals and invited to complete the questionnaires. Participants were drawn from Chatsworth Minibus Association Taxi rank. Participants who could read and write in English was included in the study and participants who could not read or write in English was excluded from the study. The purpose of the study was explained to participants and instructions were explained to participants.

Taxi drivers (the target participants) were invited to participate in the study by completing four hard copy questionnaires. The research was carried out at the Chatsworth Minibus Association Taxi Rank, Chatsworth, 4092, Durban, KwaZulu-Natal. The questionnaires were administered by the researcher and completed by participants in offices located in the Chatsworth Minibus Association Taxi Rank. The participants were given 30 minutes to complete the anonymous

questionnaires. Those who chose to participate were then required to complete the questionnaires provided, consisting of the biographical questionnaire (Appendix E) as well as the other four mentioned above. Participants consented to participate in the study. The researcher collected the completed questionnaires from participants.

3.5 Data Analysis

Data were analysed using IBM Statistical Package for the Social Sciences 26 (SPSS 26). The statistical programme was chosen for this study because it is widely used to analyse quantitative data in social sciences and was appropriate to use when taking into account the high amount of data collected within the present study (N=130).

Firstly, descriptive statistics were used to analyse the relevant data in this study. This includes means, medians, standard deviations, kurtosis and skewness. Cronbach alpha coefficients (α) was then used to assess the internal consistency of the measuring instruments used in the study, namely HIV risk scale, Kessler psychological distress scale, alcohol use disorders identification test and posttraumatic stress disorder symptom scale. Having the Cronbach alpha coefficient is necessary as it displays important information that relays the proportion of error variance presented in the relevant scale (Gregory, 2007). Tests with high internal consistency show stability of scores which in turn is an appropriate measure of reliability. This study used Likert-type scales and computed Cronbach Alpha to determine the internal consistency of the instruments used. A Cronbach alpha coefficient of 0.70 is acceptable internal consistency (Gregory, 2007).

Spearman's Rank Order Correlation, a nonparametric test was used to specify the relationship between the variables in the study. The level of statistical significance in this study was set up as $r \leq 0, 05$. The strength of the correlations in the study took into consideration r-values, this shows the significance of the relationships among variables. The r-values range between 0 (0%) and 1 (100%). The r-values that are closer to 1 indicates no correlation other than due to chance and that the null hypothesis of the study is correct. The r-values closer to 0 indicates that there is a high possibility that the null hypothesis of the study is incorrect. And, linear and multiple regressions were conducted to determine whether HIV Risk was predicted by PTSD, alcohol use

and psychological stress. Regressions were used to analyse whether predictors (independent variables) significantly predicted a criterion (dependent variable).

3.6 Reflexivity:

Reflexivity refers to sensitivity to ways in which the research process and the researcher can shape the data collection process as well as taking into consideration prior experiences, beliefs and assumptions (Terre Blanche, Durrheim, & Painter, 2006). Within the context of the study, the researcher who had face-to-face contact with participants needed to take consideration of how the interaction might have influenced the data collection process and interpretation of results irrespective of personal background, beliefs, assumptions and previous experiences. It is also important to note that participants' willingness to participate and complete the questionnaires might have been shaped by the way the researcher approached participants. The researcher was aware of risks that were related to working with mobile populations and using public transport as the researcher also used public transport regularly.

Also, participants' responses might have been shaped by their level of commitment to the study as participants. The researcher was aware that some of the questionnaire items might have put off interest or motivation in some of the participants, depending on how they personalised the information asked.

3.7 Ethical Considerations

Ethical considerations helped the researcher to avoid harm to participants during data collection. It was reiterated to participants that all their responses were confidential, and no names would appear on any part of the study as only group results were to be reported. The researcher was aware of the social setting that was crowded and noisy but took care to ensure that participants completed the questionnaires in quiet rooms located at the Chatsworth Minibus Association Taxi Rank at the convenience of the participants. The researcher was aware of the sensitive nature of the research topic and ensured that information provided by participants was treated as confidential and not shared with third parties. The researcher did make sure that all participants were comfortable and felt safe throughout the data collection process.

The study took into consideration ethical dimensions such as anonymity, informed consent, confidentiality and voluntary participation. Participation was strictly voluntary and there was no incentives for participation, and no person was advantaged or disadvantaged in any way for choosing to participate or not participate in the study. Participants were invited to participate in the study, and they were asked to complete four anonymous questionnaires. Anonymity and confidentiality were maintained as the instruments used did not require participants to write their names and participant information was kept under lock and key throughout the study. Questionnaires were returned anonymously, so their responses could not be linked to them personally. Participants were able to refuse to answer any questions they would prefer not to, and they could choose to withdraw from the study as they wished. Confidentiality was to be guaranteed through reporting group results.

The findings of the study would be in form of a research report that would be kept in the university library and summary of results can be made available upon request. The transcripts would be kept under lock and key in the researcher`s office, raw data and the transcripts will be destroyed after 5 years.

The next chapter presents results that were obtained in the study. The themes obtained from the collected data are discussed.

CHAPTER 4

4.1 RESULTS

Demographic characteristics of the study sample is shown in Table 1 and 2 below.

Table 1: Age

Age

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Age	129	17	64	36.22	11.043	.641	.213	-.483	.423
Valid N (listwise)	129								

➔ Age of the participants ranged between 17 and 64, with a mean age of 36.22

Table 2: Gender

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	.8	.8	.8
	Female	4	3.1	3.1	3.8
	Male	125	96.2	96.2	100.0
	Total	130	100.0	100.0	

➔ The sample consisted of four females (3.1%) and 125 males (96.2%). One participant did not report on their gender

4.2 DESCRIPTIVE STATISTICS

The descriptive statistics for all measures that were used in the study are reported in Table 4. According to Table 4, HIV risk scores ranged between 6 and 20 with a mean of 11.89 (*SD* = 3.37). Psychological distress scores ranged from 10 to 35 with a mean of 19.32 (*SD* = 6.83). The

alcohol use disorders identification test scores ranged from 0 to 30 with a mean of 7.21 (*SD*= 7.97) and the posttraumatic stress disorder symptom scores ranged from 0 to 44 with a mean of 10.84 (*SD*=11.94).

Table 3:

Descriptive Statistics

Descriptive Statistics: IV's and DV

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
HIV Risk Score	124	6	20	11.89	3.374	.149	.217	-.657	.431
Psych_distress	120	10	35	19.32	6.832	.209	.221	-1.138	.438
Final_Audit	113	0	30	7.21	7.973	.990	.227	.049	.451
Final_PTSD	113	0	44	10.84	11.936	.941	.227	-.149	.451
Valid N (listwise)	88								

4.3 Normality of tests

Tests were used to check for normality, the Shapiro-Wilk tests and histograms below all showed non-normal distributions for each variable (Table 5 & 6). Therefore, it was decided to use non-parametric tests for this study, which are Spearman's correlations. It was found that all variables in the study were not normally distributed according to the Shapiro-Wilk and Kolmogorov-Smirnova tests (Table 5). It is also worthy to note that, in terms of skewness and kurtosis (Table 4), they were all under 1 which means that they were normal, except for 'psych distress' (*Kurtosis* = -1.138).

Table 4

Tests of Normality

HIV Risk Score

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Final HIV Risk Score	.110	124	.001	.971	124	.009

Psychological Distress

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Psych_distress	.123	120	.000	.938	120	.000

a. Lilliefors Significance Correction

AUDIT

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Final_Audit	.186	113	.000	.847	113	.000

a. Lilliefors Significance Correction

PTSD

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.

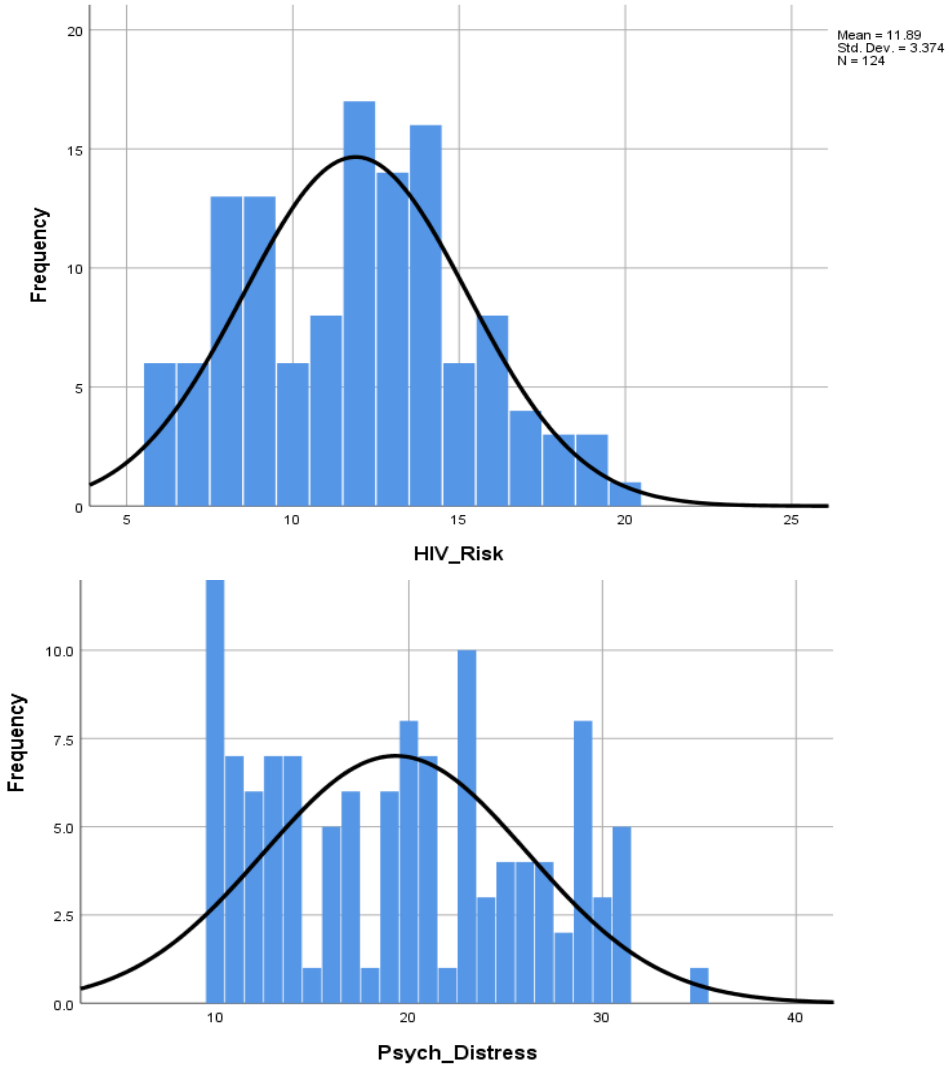
Final_PTSD	.182	113	.000	.848	113	.000

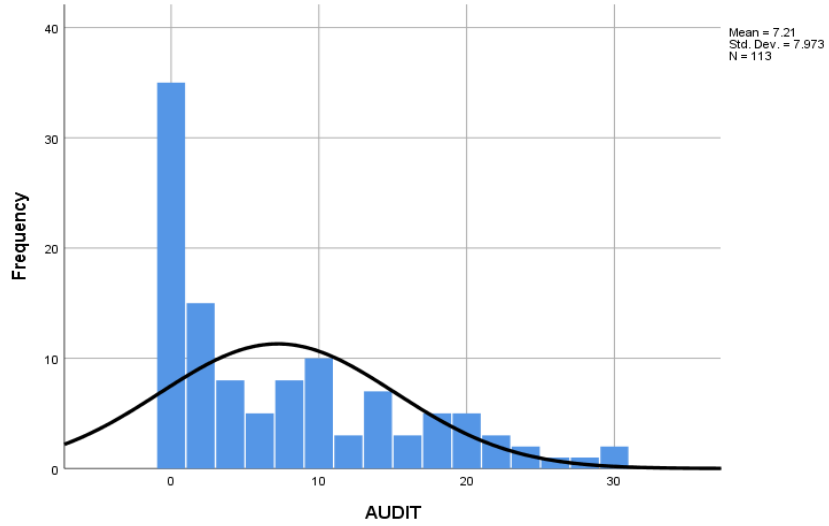
a. Lilliefors Significance Correction

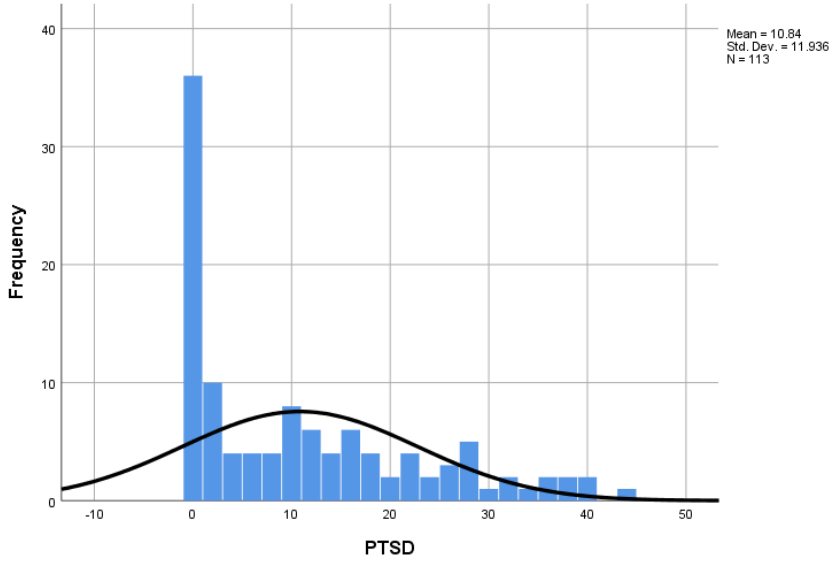
The following histograms indicate that HIV risk may be normally distributed, otherwise it shows that the other variables (PTSD, Psych distress and AUDIT) are not normally distributed.

Table 5

Histograms indicating normality of variables







Spearman's correlation

The Spearman's correlations were done to determine the relationship among HIV risk, psychological distress, alcohol use and PTSD. The results are indicated in Table 7.

Spearman's Correlations (NON-PARAMETRIC)

			HIV_Risk	Psych_Distress	AUDIT	PTSD
Spearman's rho	HIV_Risk	Correlation Coefficient	1.000	.187*	.092	.062
		Sig. (2-tailed)	.	.047	.345	.520
		N	124	114	108	109
	Psych_Distress	Correlation Coefficient	.187*	1.000	.465**	.587**
		Sig. (2-tailed)	.047	.	.000	.000
		N	114	120	105	105
	AUDIT	Correlation Coefficient	.092	.465**	1.000	.586**
		Sig. (2-tailed)	.345	.000	.	.000
		N	108	105	113	100
	PTSD	Correlation Coefficient	.062	.587**	.586**	1.000
		Sig. (2-tailed)	.520	.000	.000	.
		N	109	105	100	113

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 6

As shown in Table 7, HIV risk is significant correlated with psychological distress ($p<0.05$). There was no correlation between HIV risk and alcohol use disorder. HIV risk had no relationship with posttraumatic stress disorder. Psychological distress had a positive correlation with the alcohol use disorder ($\rho = .456$, $p < .01$). Alcohol use disorder was correlated with PTSD ($\rho = .587$, $p < .01$).

4.4 REGRESSION ANALYSIS

Linear and multiple regression analysis was done in order to determine whether alcohol use, PTSD and psychological stress predicted HIV risk.

HIV risk and psychological distress

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.191[a]	.036	.028	3.335	.036	4.227	1	112	.042

a. Predictors: (Constant), Psych_Distress

It can be noted that psychological distress accounted for 2.8% of the variation in HIV risk with adjusted R_2 = .028, a very small effect size (Cohen, 1988).

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.022	1	47.022	4.227	.042[b]
	Residual	1245.899	112	11.124		
	Total	1292.921	113			

a. Dependent Variable: HIV_Risk

b. Predictors: (Constant), Psych_Distress

Psychological distress statistically significantly predicted HIV risk, $F(1,112) = 4.23$, $p < .05$.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.136	.947		10.703	.000
	Psych_Distress	.095	.046	.191	2.056	.042

a. Dependent Variable: HIV_Risk

Equation: HIV risk = 10.136 + (0.095 + Psychological Distress).

Unstandardized B = 10.136, which means that for every unit increase in psychological distress there is a predicted 0.095 unit increase for HIV risk.

HIV risk and alcohol use disorder: Not significant

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.025[a]	.001	-.009	3.400	.001	.064	1	106	.801

a. Predictors: (Constant), AUDIT

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.737	1	.737	.064	.801[b]
	Residual	1225.143	106	11.558		
	Total	1225.880	107			

a. Dependent Variable: HIV_Risk

b. Predictors: (Constant), AUDIT

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.821	.448		26.381	.000
	AUDIT	.010	.041	.025	.253	.801

a. Dependent Variable: HIV_Risk

HIV risk and PTSD: Not significant

Model Summary

Model	R	R	Adjusted R	Std. Error of	Change Statistics

		Square	Square	the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.065[a]	.004	-.005	3.366	.004	.459	1	107	.500

a. Predictors: (Constant), PTSD

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.199	1	5.199	.459	.500[b]
	Residual	1212.654	107	11.333		
	Total	1217.853	108			

a. Dependent Variable: HIV_Risk

b. Predictors: (Constant), PTSD

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.835	.439		26.964	.000
	PTSD	.018	.027	.065	.677	.500

a. Dependent Variable: HIV_Risk

4.5 MULTIPLE REGRESSION WITH ALL IVS

Model Summary

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.336[a]	.113	.081	3.263	.113	3.569	3	84	.017

a. Predictors: (Constant), PTSD, AUDIT, Psych_Distress

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	114.017	3	38.006	3.569	.017[b]
	Residual	894.426	84	10.648		

	Total	1008.443	87			

a. Dependent Variable: HIV_Risk

b. Predictors: (Constant), PTSD, AUDIT, Psych_Distress

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	8.891	1.111		8.004	.000
	Psych_Distress	.207	.069	.396	3.013	.003
	AUDIT	-.080	.058	-.178	-1.385	.170
	PTSD	-.011	.040	-.038	-.268	.789

a. Dependent Variable: HIV_Risk

Only psychological distress in the model predicted variance in HIV.

Chapter 5

5.1 Discussion

The purpose of this chapter is to discuss the findings of the study. The discussion focuses on the associations between variables and in particular, correlations of HIV risk, psychological distress, alcohol use disorder and posttraumatic stress disorder (PTSD). This chapter highlights key findings and provides a critical discussion within the context of HIV risk among taxi drivers in Durban. The objective of this study was to assess HIV risk behaviours among taxi drivers in Durban. The discussion is based on the hypotheses presented in this study. The hypotheses sought to establish a relationship between HIV risk and distress, HIV risk and alcohol use disorder and HIV risk and posttraumatic stress disorder among taxi drivers.

In South Africa, taxi drivers play an integral role in the economic growth and viability of the transport industry in South Africa. With the majority of South Africans using public transport as a primary mode of transport, taxi drivers are perceived as providing an essential service to the nation. However, factors that exert immense pressure on the work of a taxi driver contributes towards the negative well-being of a taxi driver. The findings of this study associated negative well-being with HIV risk (Kimuna & Djamba, 2012).

The findings indicated a high internal consistency for all of the instruments used in this study. Firstly, descriptive statistics were analysed and tests of normality were done on the three scales used in the respective study. Spearman's correlation was conducted on the three measuring instruments used in the study, namely, the HIV risk scale, Kessler psychological distress scale, Alcohol use disorders identification test and Posttraumatic stress disorder symptom scale. This type of correlation was used to specify the relationship between variables used in the study. It was hypothesised that there was no relationship between HIV risk and psychological distress, alcohol use disorder and PTSD. The measuring instruments were the HIV risk scale, Kessler psychological distress scale, alcohol use disorders identification test and posttraumatic stress disorder symptom scale, respectively.

The findings of this study indicated that there was a statistically significant correlation between HIV risk and psychological distress. HIV risk was associated with psychological distress. The results confirmed previous findings which showed a relationship between HIV risk and

psychological distress (Seedat et al., 2009). This implies that taxi drivers who experienced psychological distress showed HIV risk profiles. The results of this study are supported by national population-based studies which depict psychological distress and HIV risk. Nationally based studies, for example, a study conducted by Peltzer, Simbayi, Kalichman, Jooste, Cloete, & Mbelle (2009) indicated high HIV risk behaviours which were associated with psychological distress. The results of this study demonstrate that HIV risk is higher in some work groups than others and in this case, taxi drivers in Durban showed HIV risk behaviours. The results are in line with previous findings which showed HIV risk among mobile work groups such as truck drivers (Ramjee & Gouws, 2002). Psychological distress is associated with depression and research evidence shows an association between depression and HIV risk (Peltzer, 2003).

Psychological distress decreases work performance (Peltzer, 2003). Distressed employees are at risk of self-damaging behaviours such as promiscuity (Kimuna & Djamba, 2012). The work of a taxi driver is fast-paced and exhausting as most of them are paid on a commission basis. The results of this study are supported by previous studies which show that individuals who perform hard work and working long hours are vulnerable to HIV infection. In South Africa, research shows that taxi drivers are more likely to experience psychological distress (Peltzer, 2003). Psychological distress is associated with unmanageable workload, burnout and suicidal ideation (Dipeolu, 2014).

Psychological distress correlated significantly with alcohol use disorder. The findings confirm previous research which shows that excessive use of alcohol results in psychological distress (Ncama et al., 2013). Alcohol abuse exposes individuals to reckless behaviour (Ncama., 2013). Taxi drivers are prone to alcoholism due to a wide variety of reasons such as availability of alcohol on taxi routes, drinking as a form of entertainment and drinking to kill boredom or have leisure. Taxi drivers could drink as a group sharing their good experiences and frustrations even though they sometimes engage in road rage and cutthroat competition. Taxi drivers who work on a shift basis could drink alcohol while waiting for their turn. Alcohol could be used as a comforter to keep taxi drivers in good spirits and to boost morale among taxi drivers. Drinking and driving is a common traffic offence in South Africa, and it causes fatal accidents that could result in loss of life (Peltzer, 2003). Drinking could result in public fights and assault of passengers (Peltzer, 2003). Alcoholism is also another way of coping with stress and dealing

with difficult situations (Seedat et al., 2009). However, the findings in this study showed that there was no relationship between HIV risk and alcohol use disorder.

In this study, psychological distress correlated significantly with posttraumatic stress disorder (PTSD). The results confirm previous research findings which show an association between psychological distress and posttraumatic stress disorder (Peltzer, 2003). Posttraumatic stress disorder is associated with being involved in road accidents or witnessing horrible bloody accidents (Seedat et al., 2009). Previous research confirms that taxi drivers operate under life-threatening situations in some areas of the city with criminals roaming around (Nyirensa, Chatterji, Rochat, Mutevedzi & Newell, 2013). The taxi drivers struggle to overcome adversity (Seedat et al., 2009). There are many instances in Durban where taxi drivers are involved in taxi wars. Gruesome murder is often reported and other forms of extreme violence. Vehicle collisions involving taxi drivers resulting in personal injury are often reported in Durban (Pettifor, et al., 2004). Fatal accidents involving taxi drivers are common in South Africa (Pettifor, et al., 2004). Some of the taxi drivers cause accidents and others survive fatal crashes. This could result in psychological distress and posttraumatic stress disorder. If therapy is not provided to individuals experiencing psychological distress and posttraumatic stress disorder, the individuals could engage in risk sexual practices or unconventional coping methods that could lead to self-harmful or risk behaviours such as alcohol and drug abuse (Barrett, 2003). Research shows that individuals who experience work stress and burnout are likely to indulge in alcohol as a form of escape or coping method. There is evidence which shows that alcohol use is detrimental to health and negative consequences for the taxi drivers (Peltzer, 2003).

The results of this study showed a significant correlation between alcohol use disorder and PTSD. Research shows that individuals with PTSD tend to abuse alcohol (Peltzer, 2003). Individuals with PTSD may drink to avoid intrusions of unpleasant memories (Seedat, et al., 2009). Alcohol is used to supress negative flashbacks. The behaviour of taxi drivers who drink and drive exposes passengers to accidents. HIV could be transmitted among passengers through accidents.

Simple linear regression and multiple regression analysis were conducted with psychological distress, alcohol use disorder and PTSD as independent variables, and HIV risk as the dependent variable. It was found that psychological distress explained a significant variance in HIV risk.

Psychological distress was found to be the most predictive factor of HIV risk. All the other variables had no effect on HIV risk. The findings of this study suggest that psychological distress is predictive of HIV risk. Hence, multiple regression showed that only one variable correlated with HIV risk, namely, psychological distress. This is in line with a study conducted by Peltzer (2013) which noted that psychological distress had an association with HIV risk due to primary or secondary traumatisation. This suggests that psychological distress makes taxi drivers susceptible to HIV infection.

5.2 Recommendations of the study

The findings of this study highlight the importance of providing HIV education to taxi drivers in Durban. The risk factors associated with HIV need to be emphasised to reduce the escalation of HIV in Durban. The relationship between psychological distress and HIV should be stressed and interventions to reduce workplace distress should be developed and implemented. The psychological well-being of taxi drivers should be improved through the provision of wellness programmes in the workplace. Therefore, it is important that taxi organisations in South Africa provide their employees with wellness programmes, employee assistance programmes and HIV awareness programmes to alleviate the effects of HIV on the transport industry.

Taxi drivers should be encouraged to go for HIV counselling and testing so that they know their HIV status. Employers of taxi drivers should abide by labour regulations on prescribed work hours and the minimum wage payable to taxi drivers.

5.3 Limitations of the study

The participants might have answered the questionnaires in a hurry although they had committed themselves to completing all the questionnaires. They competed for passengers, hence they would like to be on the road most of the time scouting and touting for passengers. The sample size could have been larger but the study recruited taxi drivers who were available or willing to participate during the short period allocated to the study. Participation was voluntary, some participants left before completing the study. Taxi drivers' responses could have been skewed due to the fear of answering incorrectly even though they were assured that there was no right or wrong answer. Some of the questions could have been interpreted as requiring morally correct

answers hence social desirability could have affected some of the responses given by participants.

Questions about HIV and lifestyle present moral challenges and the desire to conform to social norms hence the taxi drivers' experiences may not have been accurately represented in some questionnaire items. The study focused primarily on HIV risk, psychological distress, alcohol use disorder and PTSD but the results of the study showed no significant correlations between HIV and alcohol use disorder and PTSD. The results could have been affected by the sample size, a larger sample could have yielded better results. As the study only consisted of taxi drivers recruited in Durban, the responses may not be generalisable to the whole taxi industry in South Africa. The experiences and responses of taxi drivers from other locations may differ from those experienced by the taxi drivers in Durban.

5.4 Implications of the study

Taxi drivers need to be equipped with HIV knowledge so that they can promote healthy behaviours while doing their job. Policy and development plans should be put in place so that taxi drivers presenting with psychological distress and HIV risk should undergo wellness programmes provided by the employer or paid for by the employer. Organisational support for taxi drivers should include mental health programmes.

Awareness and prevention programmes for HIV and AIDS should be in the spotlight of the taxi industry and the department of transport in South Africa. Interventions to reduce HIV should target mobile populations in South Africa. Providing education on HIV and AIDS and its prevention is important for taxi drivers as some taxi drivers have a basic knowledge on the virus, hence, educational programmes that are cost-effective and easy to understand should be put in place for the benefit of promoting healthy behaviours. South Africa's HIV prevalence is all-time high and programmes and initiatives promoting the curbing of HIV should be a focus point especially for the taxi industry.

5.5 Recommendations for future research

It is important for tertiary institutions to collaborate with employer organisations in the transport industry and research wellness and employee assistance programmes for taxi drivers in South Africa. It is recommended that future research should focus on taxi drivers in HIV prevention

initiatives and they should participate in the development of HIV risk reduction interventions in the workplace. It is recommended that taxi drivers should be involved in population-based research on HIV and AIDS in the transport industry. Taking into consideration the generational gap between taxi drivers and most of the senior researchers on HIV and AIDS, it would be prudent for researchers to design their interventions with taxi drivers taking the centre stage in directing the research focus in HIV risk reduction and prevention.

5.6 Conclusion

The aim of the present study was to investigate the relationship between HIV risk, psychological distress, alcohol use disorder and PTSD in the taxi industry in Durban, South Africa. The responses of participants were analysed using correlations and multiple regression. In light of the study findings, it is imperative that workplaces in the transport industry should improve working conditions for taxi drivers and they should embark on vibrant HIV prevention programmes for taxi drivers. The implications of the study are that there is a need to launch HIV awareness campaigns and the department of transport should provide educational programmes for taxi drivers to reduce HIV risk behaviours and to curb the spread of HIV among mobile populations.

References:

Abdulbari Bener, Abdulbari Bener, Türker Özkan, Erol Yildirim and Khair S. Jadaan, 2017. The Impact of Aggressive Behaviour, Sleeping, and Fatigue on Road Traffic Crashes as Comparison between Minibus/Van/Pick-up and Commercial Taxi Drivers. *Journal of Traffic and Transportation Engineering*, 5(1), p.22. https://doi.org/10.17265/2328-2142/2017.01.003

Adedokun, A., Goon, D., Owolabi, E., Adeniyi, O., & Ajayi, A. (2019). On-Site Evaluation of Smoking, Alcohol consumption and Physical Inactivity Among Commercial Taxi Drivers in Buffalo City Metropolitan Municipality, South Africa. *Global Journal Of Health Science*, *11*(2), p.111. https://doi.org/10.5539/gjhs.v11n2p110

AIDSinfo | UNAIDS. (2019). Retrieved 24 January 2020, from http://aidsinfo.unaids.org/

Arndt, C., & Lewis, J. (2000). The Macro Implications of HIV/AIDS in South Africa: A Preliminary Assessment. *The South African Journal Of Economics*, *68*(5), 380-392. doi: 10.1111/j.1813-6982.2000.tb01283.x

Barrett, J. (2003). *Organizing in the informal economy*. Geneva: ILO.

Challenges that are facing the taxi industry (2019). Retrieved from http://www.compcom.co.za/wp-content/uploads/2018/09/Border-Alliance-Taxi-Association.pdf

Camlin, C., Cassels, S., & Seeley, J. (2018). Bringing population mobility into focus to achieve HIV prevention goals. Journal Of The International AIDS Society, 21, e25136. doi: 10.1002/jia2.25136

Cohen, J. (1988) Statistical Power Analysis for the Behavioral Sciences, 2nd ed. Hillsdale, NJ: Erlbaum.

Deane, K., Samwell Ngalya, P., Boniface, L., Bulugu, G., & Urassa, M. (2016). Exploring the relationship between population mobility and HIV risk: Evidence from Tanzania. *Global Public Health*, *13*(2), 173-188. doi: 10.1080/17441692.2016.1178318

Delany-Moretlwe, S., Bello, B., Kinross, P., Oliff, M., Chersich, M., Kleinschmidt, I., & Rees, H. (2013). HIV prevalence and risk in long-distance truck drivers in South Africa: a national

cross-sectional survey. *International Journal Of STD & AIDS, 25*(6), 428-438. doi: 10.1177/0956462413512803

Dipeolu I. O. (2014). HIV and AIDS in Workplace: The role of behaviour antecedents on behavioural intentions. *African journal of medicine and medical sciences, 43*(Suppl 1), 131–140.

Evian C et al. (2004). Prevalence of HIV in workforces in southern Africa, 2000-2001. *South African Medical Journal, 94*(2):125-130

Terre Blanche, M., Durrheim, K. and Painter, D., 2006. *Research In Practice*.

Fishbein, M., & Ajzen, I. (2011). *Predicting and Changing Behavior*. Hoboken: Taylor and Francis. References

Glanz, K., Rimer, B. K., & Viswanath, K. (2015). *Health Behavior: Theory, Research, and Practice*. Hoboken, NJ: John Wiley & Sons.

George, G., Surgey, G., & Gow, J. (2014). South Africa's private sector investment in training and its erosion as a result of HIV and AIDS. *South African Journal Of Economic And Management Sciences, 17*(2), 109-123. doi: 10.4102/sajems.v17i2.449

Gregory, R.J. (2007). *Psychological testing.* (5th edn.). Boston: Pearson Education Group.

Hair, J.F., Anderson, R.E., Tatham, R.L., & Black, W.C. (1998). *Multivariate data analysis.* (5th edn.). London: Prentice-Hall.

HIV and AIDS in South Africa. (2019). Retrieved 24 January 2020, from https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/south-africa

Johnson, L., Dorrington, R., & Moolla, H. (2017). HIV epidemic drivers in South Africa: A model-based evaluation of factors accounting for inter-provincial differences in HIV prevalence and incidence trends. *Southern African Journal Of HIV Medicine, 18*(1). doi: 10.4102/sajhivmed.v18i1.695

Kalichman, S., Heckman, T., & Kelly, J. (1996). Sensation seeking as an explanation for the association between substance use and HIV-related risky sexual behavior. *Archives Of Sexual Behavior, 25*(2), 141-154. doi: 10.1007/bf02437933

Kharsany, A., Cawood, C., Khanyile, D., Lewis, L., Grobler, A., & Puren, A. et al. (2018). Community-based HIV prevalence in KwaZulu-Natal, South Africa: results of a cross-sectional household survey. *The Lancet HIV*, *5*(8), e427-e437. doi: 10.1016/s2352-3018(18)30104-8

Kilburn, K., Ranganathan, M., Stoner, M., Hughes, J., MacPhail, C., & Agyei, Y. et al. (2018). Transactional sex and incident HIV infection in a cohort of young women from rural South Africa. *AIDS*, *32*(12), 1669-1677. doi: 10.1097/qad.0000000000001866

Kimuna, S., & Djamba, Y. (2012). Migration, Sexual Behavior and Perceptions of Risk: Is the Place of Origin a Factor in HIV Infection?. *Advances In Applied Sociology*, *02*(03), 167-178. doi: 10.4236/aasoci.2012.23023

Kong, X. (2019). HIV Prevention and Treatment Scale-up and Community HIV Incidence in KwaZulu-Natal, South Africa. *JAMA Network Open*, *2*(11), e1914408. doi: 10.1001/jamanetworkopen.2019.14408

Madden, T., Ellen, P., & Ajzen, I. (1992). A Comparison of the Theory of Planned Behavior and the Theory of Reasoned Action. *Personality And Social Psychology Bulletin*, *18*(1), 3-9. doi: 10.1177/0146167292181001

Mayer, K., & Pizer, H. (2005). *The AIDS pandemic*. *Amsterdam*: Elsevier Academic Press.

McGowan, T., & Kagee, A. (2013). Exposure to traumatic events and symptoms of post-traumatic stress among South African university students. *South African Journal Of Psychology*, 43(3), 327-339. doi: 10.1177/0081246313493375

Morojele, N., Nkosi, S., Kekwaletswe, C., Shuper, P., Manda, S., Myers, B., & Parry, C. (2017). Utility of Brief Versions of the Alcohol Use Disorders Identification Test (AUDIT) to Identify Excessive Drinking Among Patients in HIV Care in South Africa. *Journal Of Studies On Alcohol And Drugs*, *78*(1), 88-96. doi: 10.15288/jsad.2017.78.88

Ncama, B., Mchunu, G., Naidoo, J., Majeke, S., Pillay, P., Myeza, T., & Ndebele, T. (2013). Minibus taxi drivers' sexual beliefs and practices associated with HIV infection and AIDS in KwaZulu- Natal, South Africa. *Curationis*, *36*(1). doi: 10.4102/curationis.v36i1.59

Nyirenda, M., Chatterji, S., Rochat, T., Mutevedzi, P., & Newell, M. (2013). Prevalence and correlates of depression among HIV-infected and -affected older people in rural South Africa. *Journal Of Affective Disorders*, *151*(1), 31-38. doi: 10.1016/j.jad.2013.05.005

Offord, D., & Kraemer, H. (2000). Risk factors and prevention. *Evidence-Based Mental Health*, *3*(3), 70-71. doi.org/10.1136/ebmh.3.3.70

Patel P, Borkowf CB, Brooks JT. Et al. Estimating per-act HIV transmission risk: a systematic review. AIDS. 2014. doi: 10.1097/QAD.0000000000000298.

Peltzer, K. (2003). Prevalence of traumatic events and post-traumatic stress symptoms among taxi drivers and passengers in South Africa. Acta Criminologica, 16, 21–26.

Peltzer, K., Simbayi, L., Kalichman, S., Jooste, S., Cloete, A., & Mbelle, N. (2009). Drug Use and HIV Risk Behaviour in Three Urban South African Communities. *Journal of Social Sciences, 18*(2), 143-149. doi:10.1080/09718923.2009.11892675

Peltzer, K. (2013). HIV risk behaviour among public primary healthcare patients with tuberculosis in South Africa. *Southern African Journal Of HIV Medicine, 14*(3), 125-130. doi: 10.4102/sajhivmed.v14i3.65

Perepjolkina, V., & Reņģe, V. (2011). Drivers' Age, Gender, Driving Experience, and Aggressiveness as Predictors of Aggressive Driving Behaviour. *Journal Of Pedagogy And Psychology "Signum Temporis"*, *4*(1), 62-72. doi: 10.2478/v10195-011-0045-2

Perkonigg, A., Kessler, R., Storz, S., & Wittchen, H. (2000). Traumatic events and post-traumatic stress disorder in the community: prevalence,risk factors and comorbidity. *Acta Psychiatrica Scandinavica*, *101*(1), 46-59. doi: 10.1034/j.1600-0447.2000.101001046.x

Pettifor, A., Measham, D., Rees, H., & Padian, N. (2004). Sexual Power and HIV Risk, South Africa1. *Emerging Infectious Diseases*, *10*(11), 1996-2004. doi: 10.3201/eid1011.040252

Pretty, I., Anderson, G., & Sweet, D. (1999). Human Bites and the Risk of Human Immunodeficiency Virus Transmission. *The American Journal Of Forensic Medicine And Pathology*, *20*(3), 232-239. https://doi.org/10.1097/00000433-199909000-00003

Ramjee, G., & Gouws, a. (2002). Prevalence of HIV Among Truck Drivers Visiting Sex Workers in KwaZulu-Natal, South Africa. *Sexually Transmitted Diseases, 29*(1), 44-49. doi: 10.1097/00007435-200201000-00008

Rayment, M. (2012). Prevention of HIV-1 infection with early antiretroviral therapy. *Journal Of Family Planning And Reproductive Health Care*, *38*(3), 193-193. doi: 10.1136/jfprhc-2012-100379

Regondi, I., George, G., & Pillay, N. (2013). HIV/AIDS in the transport sector of southern Africa: Operational challenges, research gaps and policy recommendations. *Development Southern Africa*, *30*(4-05), 616-628. doi: 10.1080/0376835x.2013.830239

Sedgwick, P. (2010). Cross sectional studies. *BMJ*, *340*(feb17 1), c846-c846. doi: 10.1136/bmj.c846

Seedat, M., Van Niekerk, A., Jewkes, R., Suffla, S., & Ratele, K. (2009). Violence and injuries in South Africa: prioritising an agenda for prevention. *The Lancet*, *374*(9694), 1011-1022. doi: 10.1016/s0140-6736(09)60948-x

Steenkamp, L., Von der Marwitz, J., Baasner-Weihs, F., & Pietersen, J. (2015). Should HIV and AIDS workplace programmes still be advocated in the automotive industry?. *SA Journal Of Human Resource Management, 13*(1). doi: 10.4102/sajhrm.v13i1.609

Strebel, A., Shefer, T., Potgieter, C., Wagner, C., & Shabalala, N. (2013). 'She's a slut … and it's wrong': Youth constructions of taxi queens in the Western Cape. *South African Journal Of Psychology, 43*(1), 71-80. doi: 10.1177/0081246312474415

Talbott, J. (2009). Cross-national prevalence and risk factors for suicidal ideation, plans and attempts. *Yearbook Of Psychiatry And Applied Mental Health*, *2009*, 186. doi: 10.1016/s0084-3970(08)79116-3

Tanser, F., Bärnighausen, T., Vandormael, A., & Dobra, A. (2015). HIV treatment cascade in migrants and mobile populations. *Current Opinion In HIV And AIDS*, *10*(6), 430-438. doi: 10.1097/coh.0000000000000192

Thurlow, J., Gow, J., & George, G. (2009). HIV/AIDS, growth and poverty in KwaZulu-Natal and South Africa: an integrated survey, demographic and economy-wide analysis. *Journal Of The International AIDS Society*, *12*(1), 18. doi: 10.1186/1758-2652-12-18

Vass, J. (2005). The relationship between labour market dynamics and HIV/AIDS prevalence in South Africa - A literature review1. *The South African Journal Of Economics*, *73*(s1), 564-577. doi: 10.1111/j.1813-6982.2005.00039.x

Weber, E., Blais, A., & Betz, N. (2002). A domain-specific risk-attitude scale: measuring risk perceptions and risk behaviors. *Journal Of Behavioral Decision Making*, *15*(4), 263-290. doi: 10.1002/bdm.414

Wingood, G., & DiClemente, R. (2000). Application of the Theory of Gender and Power to Examine HIV-Related Exposures, Risk Factors, and Effective Interventions for Women. Health Education & Behavior, 27(5), 539-565. doi: 10.1177/109019810002700502

APPENDIX A: HIV risk scale (Peltzer, Simbayi, Kalichman, Jooste, Cloete & Mbelle, 2009)

Circle a statement that best describes your opinion: There is no right or wrong answer.

1 – Disagree 2 – Strongly Disagree 3 – Agree 4 – Strongly Agree

1. I am not concerned about my HIV status 1 2 3 4
2. I am not concerned about the number of sexual partners I have 1 2 3 4
3. I sometimes have sex without a condom 1 2 3 4
4. I sometimes take intoxicating substances before sex 1 2 3 4
5. In a relationship, I expect my partner to give me gifts 1 2 3 4
6. I do not ask my partner to go for HIV testing 1 2 3 4

APPENDIX B: Kessler psychological distress scale (K10)

These questions concern how you have been feeling over the past 30 days. Circle below each answer that best represents how you have been.

1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time

5. All of the time

1. During the last 30 days, about how often did you feel tired out for no good reason?

1. None of the time

2. A little of the time

3. Some of the time

4. Most of the time

5. All of the time

2. During the last 30 days, about how often did you feel nervous?

1. None of the time

2. A little of the time

3. Some of the time

4. Most of the time

5. All of the time

3. During the last 30 days, about how often did you feel so nervous that nothing could calm you down?

1. None of the time

2. A little of the time

3. Some of the time

4. Most of the time

5. All of the time

4. During the last 30 days, about how often did you feel hopeless?

1. None of the time

2. A little of the time

3. Some of the time

4. Most of the time

5. All of the time

5. During the last 30 days, about how often did you feel restless or fidgety?

1. None of the time

2. A little of the time

3. Some of the time

4. Most of the time

5. All of the time

6. During the last 30 days, about how often did you feel so restless you could not sit still?

1. None of the time

2. A little of the time

3. Some of the time

4. Most of the time

5. All of the time

7. During the last 30 days, about how often did you feel depressed?

1. None of the time

2. A little of the time

3. Some of the time

4. Most of the time

5. All of the time

8. During the last 30 days, about how often did you feel that everything was an effort?

1. None of the time

2. A little of the time

3. Some of the time

4. Most of the time

5. All of the time

9. During the last 30 days, about how often did you feel so sad that nothing could cheer you up?

1. None of the time

2. A little of the time

3. Some of the time

4. Most of the time

5. All of the time

10. During the last 30 days, about how often did you feel worthless?

1. None of the time

2. A little of the time

3. Some of the time

4. Most of the time

5. All of the time

APPENDIX C: Alcohol use disorders identification test (AUDIT)

Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain confidential so please be honest. Circle one answer that best describes your answer to each question.

Questions:

1. How often do you have a drink containing alcohol?

0 – Never

1 – Monthly or less

2 – 2-4 times a month

3 – 2-3 times a week

4 – 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?

0 - 1 or 2

1 - 3 or 4

2 - 5 or 6

3 – 7 to 9

4 – 10 or more

3. How often do you have six or more drinks on one occasion?

0 - Never

1 - Less than Monthly

2 - Monthly

3 - Weekly

4 - Daily or almost daily

4. How often during the last year have you found that you were not able to stop drinking once you had started?

0 - Never

1 - Less than Monthly

2 - Monthly

3 - Weekly

4 - Daily or almost daily

5. How often during the last year have you failed to do what was normally expected of you because of drinking?

0 - Never

1- Less than Monthly

2 - Monthly

3 - Weekly

4 - Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?

0 - Never

1- Less than Monthly

2 - Monthly

3 - Weekly

4 - Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?

0 - Never

1 - Less than Monthly

2 - Monthly

3 - Weekly

4 - Daily or almost daily

8. How often during the last year have you been unable to remember what happened the night before because of your drinking?

0- Never

1- Less than Monthly

2 - Monthly

3 - Weekly

4 - Daily or almost daily

9. Have you or someone else been injured because of your drinking?

0 – No

2 – Yes, but not in the last year

4 – Yes, during the last year

10. Has a relative, friend, doctor other health care worker been concerned about your drinking or suggested you cut down?

0 – No

2 – Yes, but not in the last year

4 – Yes, during the last year

APPENDIX D: Posttraumatic stress disorder symptom scale (PSS)

Below is a list of problems that people sometimes have after experiencing a traumatic event. Please circle the most appropriate answer.

0 - Not at all

1 - Once per week or less/ a little bit/ one in a while

2 - 2 to 4 times per week/ somewhat/ half the time

3 - 3 to 5 or more times per week/ very much/ almost always

1. Having upsetting thought or images about the traumatic event that come into your head when you did not want them to

0 1 2 3

2. Having bad dreams or nightmares about the traumatic event

0 1 2 3

3. Reliving the traumatic event (acting as if it were happening again)

0 1 2 3

4. Feeling emotionally upset when you are reminded of the traumatic event

0 1 2 3

5. Experiencing physical reactions when reminded of the traumatic event (sweating, increased heart rate)

0 1 2 3

6. Trying not to think or talk about the traumatic event

0 1 2 3

7. Trying to avoid activities or people that remind you of the traumatic event

0 1 2 3

8. Not being able to remember an important part of the traumatic event

0 1 2 3

9. Having much less interest or participating much less often in important activities

0 1 2 3

10. Feeling distant or cut off from the people around you

0 1 2 3

11. Feeling emotionally numb (unable to cry or have loving feelings)

0 1 2 3

12. Feeling as if your future hopes or plans will not come true

0 1 2 3

13. Having trouble falling or staying asleep

0 1 2 3

14. Feeling irritable or having fits of anger

0 1 2 3

15. Having trouble concentrating

0 1 2 3

16. Being overly alert

0 1 2 3

17. Being jumpy or easily startled

0 1 2 3

APPENDIX E

Biographical Participant Information Sheet

Age: ……

Gender: ……..

Race: ……

APPENDIX F

Participant Information Sheet

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Good day

My name is Thasmiri Singh; I am conducting research on the relationship between HIV risk and psychological distress, alcohol use disorders and posttraumatic stress disorder symptoms among drivers in Durban. I am inviting you to participate in this study. I am approaching you because I feel that your knowledge and experience in this study area would contribute significantly to this study. This study is relevant to the South African context as HIV mainly affects the youth and mobile groups. The study seeks to raise awareness in taxi drivers and commuters about HIV risk behaviours and how to prevent HIV in the transport sector.

Participation in this research will entail being asked to complete four selected questionnaires at a place that is convenient to you and submission to the research is considered to be consent to participate in the research. You will need about 30 minutes to complete the questionnaires. Participation is strictly voluntary and there will be no incentives for participation, and no person will be advantaged or disadvantaged in any way for choosing to participate or not participate in the study.

Participation involves completing four anonymous questionnaires, anonymity and confidentiality will be maintained as the instruments used and no participant will be asked to provide their names on the responses for the sake of anonymity and confidentiality. Questionnaires will be returned anonymously since participants are required to NOT write their name on this questionnaire, so their responses will never be linked to them personally. The researcher will not misuse the information that will be given and will not misuse the responses given by the participants. Confidentiality is to be guaranteed through only reporting group results. The researcher will also make sure that all participants feel safe and comfortable before, during and after the data collection process. The transcripts will be kept under lock and key in the researcher`s office, raw data (the transcripts) will be destroyed after 5 years. The findings of the study will be in form of a research report that will be kept in the university library and summary of results can be made available upon request.

You may refuse to answer any questions you would prefer not to, and you may choose to withdraw up until the moment you submit the anonymous questionnaires. This research does not require formal signed consent as returning the questionnaire will be sufficient in terms of consenting to the research. Hence, submission of the questionnaire will be considered consent.

Your participation in this study would be greatly appreciated.

Kind Regards

Thasmiri Singh

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Dr Calvin Gwandure