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Conference Paper Submission

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Title of Research

Social association membership and risky behaviors among adolescents in South Africa.

Sub-Theme: Youth, Education and Development

Abstract (285 words)

Background: The aim of this research to examine the relationship between social association memberships and risky behaviors among adolescents in South Africa. Social associations are the extracurricular activities that adolescent are involved in outside of school such as sports team, youth and cultural groups. In developed countries being a member of a social association has been found to have positive behavioral outcomes. In developing countries adolescents have reported high levels of boredom and a lack opportunities to be part of social associations. Risky behaviors among adolescents are notably the most important factors contributing to negative health outcomes. During 2012, an estimated 2.1 million adolescents in the world were living with HIV. Of the 2.1 million adolescents, 85% of them resided in sub-Saharan Africa. In 2014, 36% of maternal deaths in South Africa were a result of teenage pregnancies. Adolescent HIV infections and teenage pregnancy are commonly driven by risky behaviors like lack of condom use and having multiple sexual partners. Because adolescents are at the center of sustainable development, their health, wellbeing and survival is important. **Data and Methods:** Data for this study is drawn from the South African Youth Life Style Survey of 2008. The sample size is 3336 adolescents aged 12 to 19 in South Africa. A multinomial logistic regression will be employed to analyze the data.

Results: Preliminary results from the correlation analysis indicate a positive weak relationship between social association membership and adolescent risky behavior which therefore suggests a more rigorous statistical analysis; a multinomial logistic regression. **Conclusion:** Results from this research will provide a better understanding of how behaviors relate to one another and furthermore inform policies like the South African National Youth Policy and the Adolescent Youth Health Policy.

Introduction

The United Nations defines adolescents as individuals who are within the age group of 10 to 19 (Unicef, 2011). The adolescent phase is a transition period from childhood to adulthood that is characterized by pubertal maturation and independence from the parents (Casey et al., 2010). Adolescents comprise over 20% of the world's population, with more than 85% of them residing in developing countries (Blum and Nelson-Mmari, 2004). In South Africa in 2010, 30% of South Africa's population of 50.1 million consisted of adolescents (Hervish and Clifton, 2012).

The role of adolescents in South Africa is diverse. The South African Survey on the Activities of Young People (2010) reported that 11 million 7 to 17 year olds were involved in economic activities, 24.6% were attending school, whilst 35% were not attending school at all (Statistics South Africa, 2011). Adolescents play a role in care giving in households that are child-headed. In 2006, there were 0.67% children living in households that were headed by children in South Africa (Meintjes et al., 2009).

Risky behavior, behavior that can have negative health outcomes (Irwin Jr., 1993), is not the only type of behavior that adolescents engage in; social association memberships are increasingly becoming very common among adolescents. Social associations are the extracurricular activities that adolescents are involved in and they have been used as preventative strategies to reducing adolescent risky behaviors globally (Carmichael, 2008; Le, 2013; Tibbits et al., 2009). Research has shown that adolescents who were actively involved in religious groups and activities were less involved in risky sexual behaviors and behaviors related to the utilization of harmful substances like tobacco, marijuana and alcohol (Sinha et al., 2007; Steinman and Zimmerman, 2004; Tibbits et al., 2009). In developed countries extracurricular activities play significant part of school life (Le, 2013). In South Africa many adolescents have reported experiencing high levels of boredom during the week and during weekends (Fourie et al., 2011; Miller et al., 2014). Therefore it is essential to examine all possible determinants of risky behaviors including the relationship between risky behaviors and non-risky behaviors such as social association memberships.

Problem Statement

Behavior has been identified as a crucial determinant of negative health outcomes. Behaviors that are learnt and adopted during adolescence are known to continue into adulthood and additionally some of these behaviors may prevent a successful and healthy transition into adulthood (McGlinchey and Harvey, 2014). An estimated 70% of premature deaths in adults have been linked to behaviors that were instigated during the adolescence period (Fisher and Gevers, 2010). Many communicable and non-communicable diseases, as well as injury related deaths can be avoided with the adoption of non-harmful and non-risky behaviors. One of the most common examples is that of the use of condoms during sexual intercourse to prevent the contraction and spread of HIV. Numerous South African

studies have reported a lack of use and inconsistent use of condoms among adolescents (Tillotson and Maharaj, 2001; Zwane et al., 2004; Sayles et al., 2006). Condom uptake in South Africa is low with 15% of males and 18% of females reporting occasional or consistent use of condoms (Maharaj and Cleland, 2005). Drinking and driving is a risky behavior that can lead to potentially life threatening accidents and severe injuries (Schneider et al., 2007; Seedat et al., 2009). It has been reported that there is a more than five times risk of fatal road accidents among adolescent drivers compared to drivers above the age of 30 (World Health Organization, 2007). South Africa has reported the highest number of road transport accidents in the world, and in the year 2000 there were 43.0 deaths per 100 000 people which is more than double the world rate of 21.6 deaths per 100 000 people (Matzopoulos et al., 2004). Studies pertaining to the long- term effects of behaviors adopted during adolescence have been studied. An example of this, is the early adoption of cigarette smoking and later contraction of respiratory infections and lung cancer in adult ages (Strachan & Cook 1997; Thun et al. 1997). Other risk-taking behaviors of adolescents have been well researched. Some of these behaviors include illicit drug use, multiple sexual partners and engaging in violent acts with peers (Johnston, 2010; Swart et al., 2002; Varga, 2003).

Justification

The youth bulge in South Africa has the potential to become a demographic dividend which presents a window of opportunity for rapid economic growth (Pool, 2007). This means that in South Africa the overall economic development of the region in the coming two decades will be driven by young economically active people (UNESCO, 2013). Therefore, it is crucial for South Africa to invest in adolescents to help consolidate the historic global gains achieved in early and middle childhood. Furthermore, investing in adolescents can help contest inequity, gender discrimination and poverty (Unicef, 2011).

The relevance of determining the relationship between social association membership and risky behaviors among adolescents is two-fold. Firstly, risky behaviors make a significant contribution to the morbidity and mortality of adolescents. For example, lack of condom use can lead to the contraction of HIV and STI's, underage driving can lead to injury and mortality and alcohol abuse can also lead to injuries (Idele et al., 2014; Muula, 2008; Peltzer and Ramlagan, 2009; Seggie, 2012). Secondly, it will provide a better understanding of how all behaviors relate to one another. Social association memberships in developed countries are highly common and accessible and they involve being engaged in behaviors that increase the likelihood of more positive behaviors (Le, 2013). Very few studies have tested this relationship on a South African national context (Miller et al., 2014; Sharp et al., 2011; Tibbits et al., 2009). Understanding this relationship will help inform South African Youth policies and programmes mandated by policies like the Adolescent Youth Health Policy 2012 and the Integrated Youth Development Strategy 2012-2016. Both of these policies seek to improve

health outcomes and the livelihoods of adolescents so that they can contribute to development of the country.

The area of adolescent risky behaviors in South Africa is well researched (Burrows and Laflamme, 2008; MacPhail and Campbell, 2001; Onya et al., 2012; Shilubane et al., 2013). However, previous research has not looked at the role of social associations in relation to risky behaviors. Therefore this research will contribute to a growing body of literature and it will bridge a knowledge gap by studying the relationship between social associations and risky behaviors that is an understudied area.

Research Objectives:

1. To examine the levels of risky behaviors and social association memberships among adolescents in South Africa
2. To identify the demographic and socioeconomic determinants of risky behaviors and social association memberships among adolescents in South Africa.
3. To test the relationship between social association membership and risky behaviors among adolescents in South Africa.

Literature Review

Sexual Behaviors

Quantitative studies conducted in the North West province in South Africa have reported that drivers of risky sexual behavior were substance use like alcohol, tobacco and drug use (Aarø et al., 2014; Amoateng et al., 2014). Studies also reported that black adolescents and male adolescents had a higher likelihood of engaging in risky behaviors. Furthermore, adolescents who had strong religiosity had a decreased odds of risky sexual behaviors (Aarø et al., 2014; Amoateng et al., 2014). In the Kwazulu-Natal province in South Africa, adolescent males who engaged in early sexual debut were more likely to have multiple sexual partners (Harrison et al., 2005). Adolescents in South African townships have reported condom use as unnecessary when they are in “steady” relationships (MacPhail and Campbell, 2001).

Substance Use

In the United States of America tobacco and alcohol use is higher among rural students, followed by suburban and then urban adolescents. (Atav and Spencer, 2002). In rural South Africa, cigarette smoking was found to increase with age from 4.9% at age 11 to 17.1% at age 18 and it was reported to be initiated at age 11 and 12 when there was an adult smoker in the household (Mashita et al., 2011). Another study in a rural area in South Africa found that the lifetime use of alcohol was 22% and the lifetime use of cigarettes was 10% (Onya et al., 2012). In Cape Town, South Africa, adolescent males are more likely to smoke cigarettes than females. The likelihood of cigarette smoking was also found to be high amongst colored adolescents and then black adolescents (Brook et al., 2005).

Other behaviors

Road transport accidents have been found to be one of the leading causes of death among adolescents globally (Odero et al., 1997). A study on injury related behaviors among various South African communities revealed that 52,8% of adolescents in grade 11 in Cape Town had travelled in the front seat of a car without a seatbelt and 27% of these adolescents had been passengers in a car with a driver that was driving under the influence of alcohol (Flisher et al., 2006). Attempts to commit suicide among adolescents in South Africa were found to have increased from 18% in 2002 to 19% in 2008. Female adolescents were reported to have a higher likelihood of attempting suicide than male adolescents (Shilubane et al., 2013).

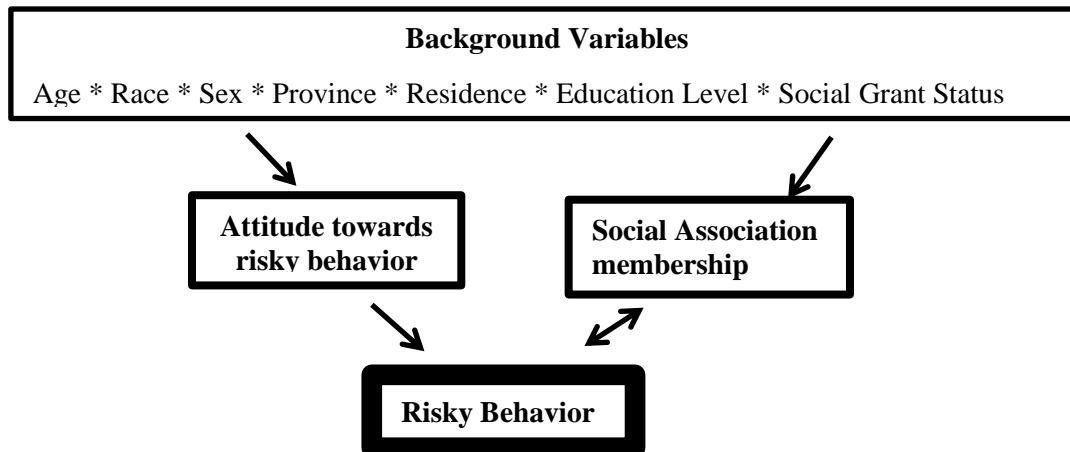
Social Association Memberships

Research in the the United States of America has found that the more religious activity that adolescents engaged in, the less involved they were in sexual behavior and substance use behaviors (Sinha et al., 2007; Steinman and Zimmerman, 2004). Studies in South Africa have illustrated that there is a great need for leisure activities as there are large number of adolescents who have reported boredom experiences, and those who reported boredom experience were found to be more likely to report alcohol or marijuana use as last sexual encounter (Fourie et al., 2011; Miller et al., 2014; Sharp et al., 2011). Similarly, adolescents in Cape Town who participated in leisure activities were found to be less likely to make use of substances (Tibbits et al., 2009).

Theoretical Framework

The theoretical underpinning of this study will be the Social Control Theory which was developed by Travis Hirschi in 1969 to explain the causes of delinquency among young people. According to this theory, conformity to behavior is achieved through socialization and bond between the individual and the four major components of society; attachment, commitment, involvement and belief (Wiatrowski et al., 1981). The stronger the social bond with each element the less likely delinquent behavior will occur. Attachment is the ties that the adolescent has with other individuals in the family environment. Commitment relates to the individuals aspirations in life. Involvement is the time that the individual spends doing conventional activities that lead toward socially valued success. Belief refers to the acceptance of moral validity of the social value system (Wiatrowski et al., 1981).

Conceptual Framework



Adapted from Hirschi (1969)

The conceptual framework was adapted from the Social Control theory and it shows how background variables can influence attitudes towards behavior and social association membership to influence risky behavior. From the framework it is evident there is a two-way relationship between social association membership and risky behavior. The conceptual framework included the involvement and belief environments. The involvement environment is the social association membership and the belief environment is the attitude towards the behavior.

Hypothesis

- H_0 : Adolescent social association memberships reduce the probability of risky behaviors in South Africa.
- H_1 : Adolescent social association memberships do not reduce the probability of risky behaviors in South Africa.

Methodology

The study will be quantitative analyzing secondary data from the South African Youth Life Style Survey (2008). The study population is adolescents, male and female of ages 12 to 19 in South Africa. The sample size for this research is 3336 South African adolescent who have engaged in a risky behavior across all the nine provinces of the country. The dependent variable that will be analyzed in this study will be adolescent risky behaviors (arb). This variable will be an index variable that will be generated by merging six other variables that will be grouped into three categories; sexual behaviors, substance behaviors and other behaviors. The sexual behavior category is made up of the variables ever had sex, condom use and multiple sexual partners. The substance behaviors consist of the variables ever used tobacco, ever used alcohol and ever used drugs. The other behavior consists of categories attempted suicide, driving without seatbelt and driving under influence of alcohol. For each behavior the response of interest was yes, except for condom use which was no, these responses were used to generate the arb index variable.

Variable Name	Definition	Coding in study
arb	Adolescent risky behavior: when adolescent engages in any of the risky behaviors; sexual, substance, or other behaviors	arb (1)

The independent variable for this study is adolescent social association memberships (asam) that will be generated as an index variable combining the five social associations; religious/youth, sports, drama, choir and other groups. The asam index variable will combine all the “yes” responses to each social association membership.

Variable Name	Definition	Coding in study
asam	Adolescent social association membership: when the adolescent is a member of any one of the social associations; religious, sports, drama, choir and other groups.	asam (1)

The control variables for this study are age, race, sex, province, educational level, social grant status, and residence.

Variable Name	Definition	Coding in study
Age	The age of the adolescent	Years
Race	Race of adolescent	White (1) African (2) Indian (3) Colored (4)
Sex	Sex of the adolescent	Male (1) Female (2)
Province	Province adolescents resides in	Gauteng(1) Limpopo(2) Free State(3) Mpumalanga(4) North West(5) Eastern Cape (6) Northern Cape(7) Kwazulu-Natal(8) Western Cape(9)
Education Level	Education level of adolescent	Grade 5 or less (1) Grade 6 to 8 (2) Grade 9 to 11 (3) Grade 11 (4) Grade 12 (5)
Social Grant Status	Whether anyone in household receives a social grant	Yes (1) No (2)
Residence	The type of residence that the adolescent lives in	Metro (1) Urban (2) Rural (3)

Ethical Issues

The study will use secondary data and the information on the respondents of the survey is anonymous and is also unknown by the researcher conducting this research, this therefore protects the identity of the respondents.

Data Analysis

The data will be managed and analyzed using Stata version 13. In order to examine the levels of risky behaviors and social association memberships among adolescents in South Africa; firstly frequency distributions of each risky behavior and each social association by age, sex and race will be done. Secondly, rates of risky behaviors and social associations will be generated.

To identify the demographic and socioeconomic determinants of risky behaviors and social association membership a multinomial logistics regression will be done. This will be done by firstly doing chi-square tests of all possible determinants to test for the variables that are significantly associated with risky behavior. Those that are a significant with a p-value of less than 0.05 will go into the multinomial model. In order to examine the relationship between social associations and risky behaviors a probit multinomial logistic regression will be employed. Two models will be done one with an indexed independent variable (asam) and another one with five separate independent variables (youth/religious, sports, choir, drama and other). The probit multinomial logistic regression will allow determining if there is a relationship between the independent and dependent variable as well as determine if there is particularly a multi-way relationship between social association memberships and risky behavior.

Limitations

Firstly, because the issue of risky behaviors is quite sensitive, adolescents may have been scared or reluctant to tell the truth about the behaviors that they engage in, therefore there may be underreporting of risky behaviors. Secondly, the data for this study is cross sectional which means it can only test for associations and not causality between dependent and independent variables.

Preliminary Results

Below are graphs describing the preliminary results from the study. Figure 1 illustrates that distribution of adolescent risky behaviors by gender. With each risky behavior all there is a higher percentage number of male adolescent engaging in risky behaviors than female adolescents.

Figure 1

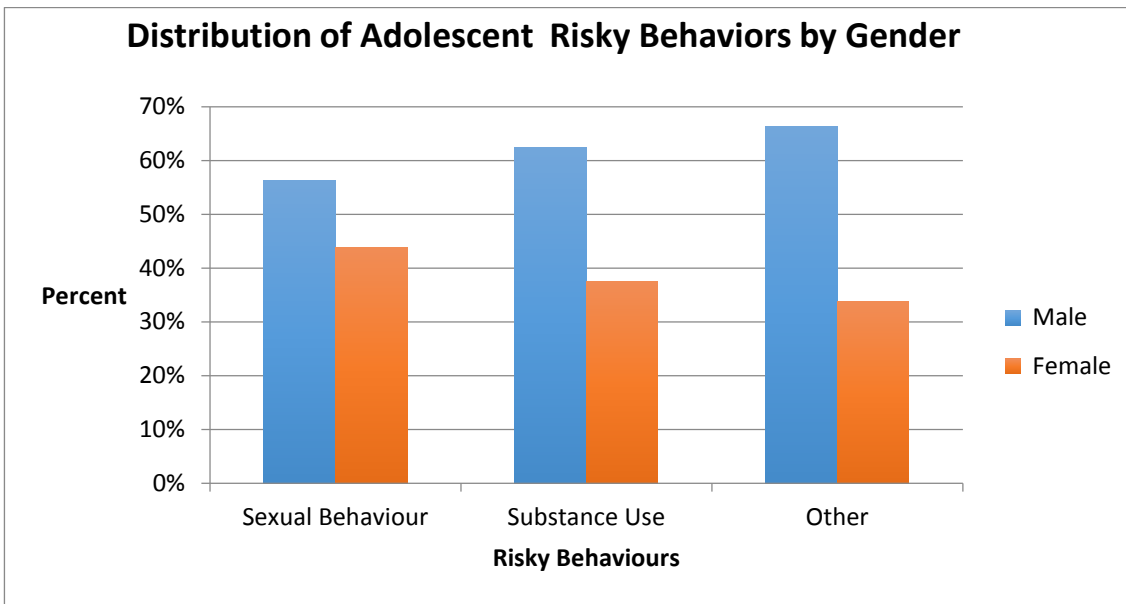


Figure 2 is a distribution of adolescent social association memberships by gender. The graph indicates that there are more males involved in religious groups, sports and other groups. There are a higher percentage number of females involved in drama and choir groups.

Figure 2

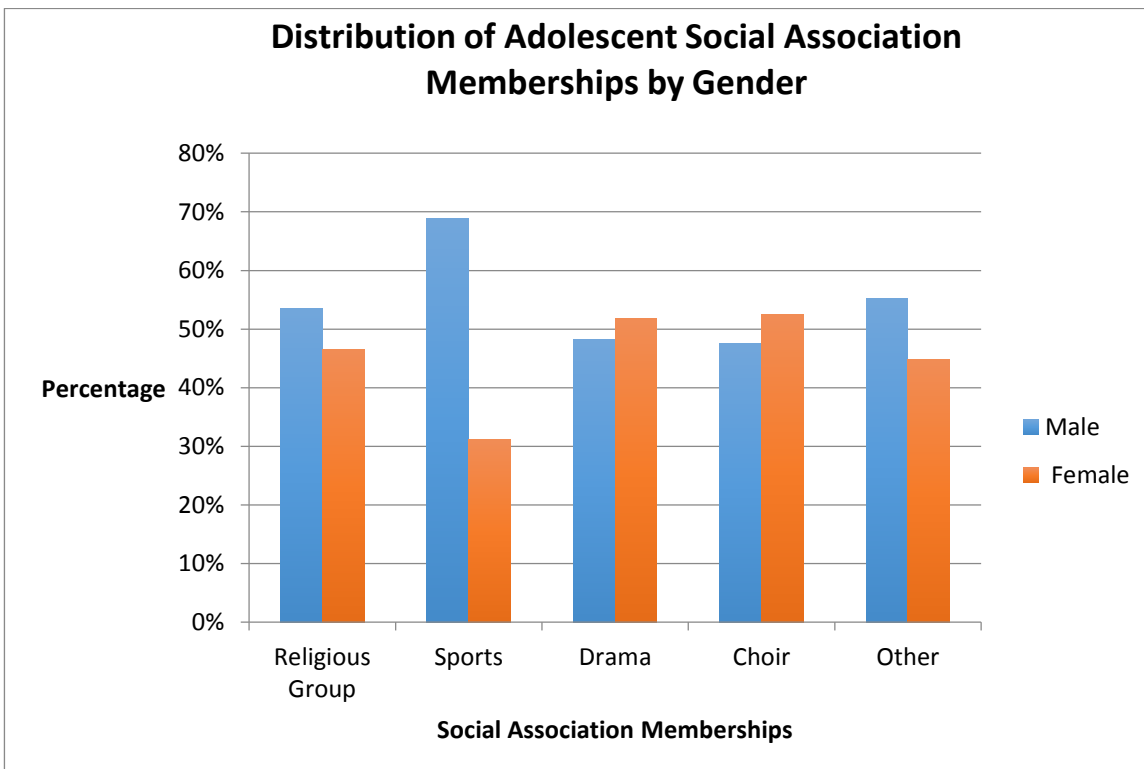
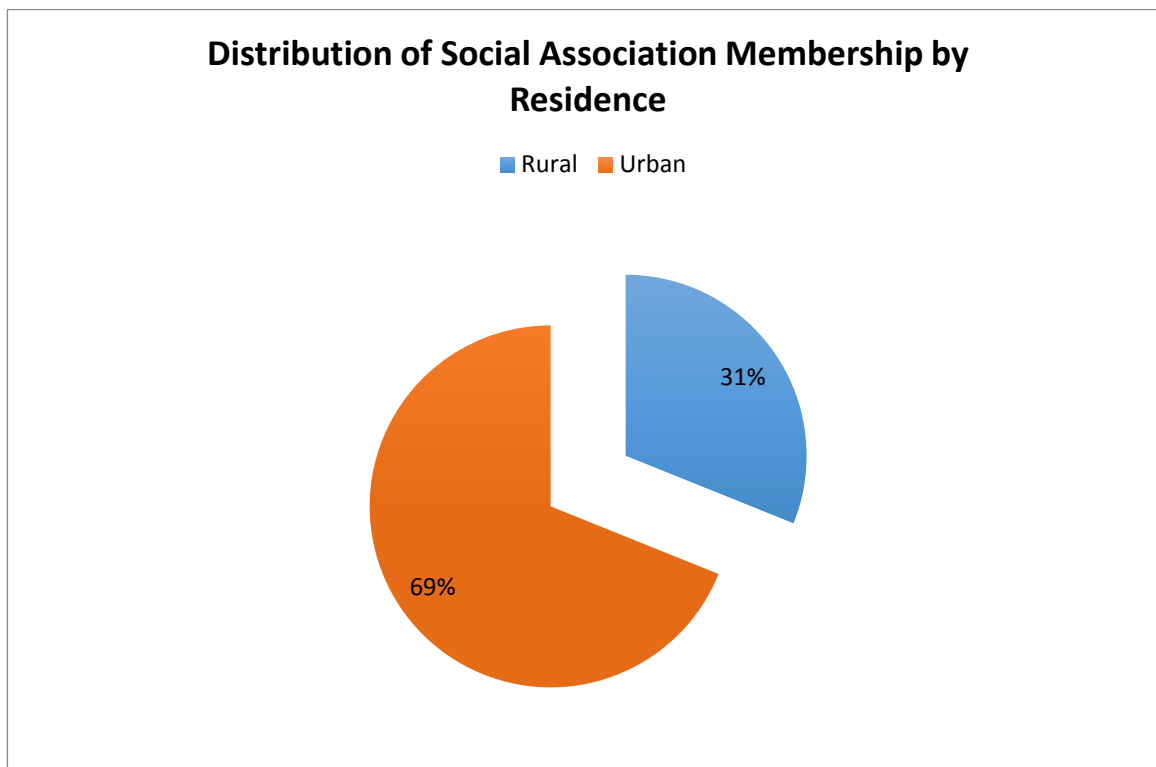


Figure 3 shows the distribution of social association membership by the type of residence that the adolescent resides in. It is evident from pie chart that there are a higher number of adolescents involved in social associations in urban areas than in rural areas.

Figure 3



Discussion and Conclusion

The descriptive results do not tell us enough to answer the question on whether there is a relationship between social associations and risky behaviors among adolescents in South Africa. Therefore the next level of this research will be to run multinomial probit logistic regression model to examine the relationship and test the proposed theory and hypothesis of the research. The results from the study are expected to inform youth health policies like the Adolescent Youth health policy 2012 and National Youth Development Strategy 2012-2016 which both have components on adolescent youth health. This will help in ensuring that adolescents play a role in the development of South Africa and that South Africa takes advantage of the demographic dividend.

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