

The Influence of Motives and Significant others in Adolescent Tobacco Smoking: Evidence from a Survey of Secondary School Adolescents in Dar es Salaam

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ABSTRACT

This study explored the psychosocial influence of tobacco smoking among secondary school adolescents in Ilala district, Dar es Salam region. Specifically, the study sought to explore the influence of significant others and motives on tobacco smoking among secondary school adolescents. A cross-sectional survey was conducted among 400 secondary school adolescents aged between 12 and 22. The findings revealed that the major motive that drives adolescents to smoke tobacco was experimentation. Other motives include; the desire to reduce frustration, pleasure, persuaded to smoke, a way of solving problem, and the habit of being sent to light up cigarette. It was further revealed that smoking cigarette as a way of keeping busy had little influence on secondary schools' adolescents in Ilala district while the influence of close friends and brothers made a strong contribution to secondary school adolescents in Ilala district to smoke tobacco. Significant others like sister, mother and father were found to have little influence on secondary schools' adolescents' tobacco smoking behavior. Based on the findings of this study, it is recommended that factors such as motives and the influence of significant others need to be taken into account when considering psycho-educational intervention programs to preventing smoking.

Keywords: *Psychosocial, Motive, Significant Others, Tobacco Smoking, adolescence*

INTRODUCTION

Adolescence is the transitional period from childhood to adulthood in which a person experiences rapid physical growth along with mental and social growth development (Santrock, 2005). During this stage an adolescent commence to build abstract thinking. The processes associated with abstract thinking increase slowly when solving problems or making decisions (Cobb, 2001). During adolescence period an individual start to keep a distance from parents and tries to build autonomy. What's more, during the middle stage of adolescence friends play a crucial role in this process. When the late period of adolescence is finally reached, abilities in abstract thinking develop fully, and as a result, the person thinks about his/her future roles and plans (Santrock, 2005). While undergoing these processes, adolescents achieve physical, mental, and social growth, together with the increase of socio-cultural changes. Individual adolescents tend to form and develop their attitude and value systems as well as securing and maintaining a social status associated with being an adult (Cobb, 2001). Most people may experience these processes and changes without many problems; however, some may fail to copy and adjust to a new social life and associate with friends, becoming easily exposed to tobacco or alcohol (Lugoe, 1996).

Adolescent's Tobacco smoking and its prevalence in United Republic of Tanzania (URT)

Most often smoking does not start all at once (Taylor, 2003). There is a period of initial experimentation, during which an adolescent tries out a cigarette, experiences peer pressure to smoke, and develops attitudes about what smoking is like. Following experimentation, only some adolescents go on and eventually become heavy smokers. The majority of adult smokers begins smoking during adolescence and become dependent on nicotine during the first year of tobacco use (Cobb, 2001; Shamrock, 2005; and Feldman, 1997). Adolescents' tobacco smoking has been reported to be associated with other health compromising behaviors such as early initiation of teenager sexual activities, alcohol, illicit drug use and suicide (Cobb, 2002). Tobacco use by

children and adolescents is becoming a global problem. It has been reported that nearly 82,000-99,000 children and adolescents all over the world begin smoking every day (World Health Organization, 1999). Research shows most smokers commence smoking before the age of 18 years, with the median age of initiation at 15 years. About half of them would continue to smoke to adulthood and half of the adult smokers are expected to die in early years of adulthood due to smoking related diseases (U.S. Department of Health and Human Services, 2012). The current available data for tobacco smoking rates among adolescents in the United Republic of Tanzania (URT) is not national wide surveyed. Various studies suggest an increase in tobacco use among adolescents (Drope, 2011). In the study by Siza and Mshiu (2007) which interviewed 423 participants between the ages of 13 and 15 years in Moshi rural district, it was revealed that a total of 24.4 percent (112 out of 423) of respondents reported that they had tried smoking tobacco. Another study conducted by Kaduri (2008) in Kinondoni district, Dar es Salaam city, found that the tobacco smoking prevalence was 10.3 percent among male adolescents and 3.4 percent among female adolescents.

In another study in Temeke district by Kida *et al.*, (2010) the prevalence of tobacco smoking was reported to be about 23 percent and 16 percent among male and female secondary school adolescents respectively. Jagoe and colleagues (2002) in Ilala district found the tobacco smoking prevalence of about 27 percent in male and 27 percent female aged 15 years and above. Furthermore, Siza *et al.*, (2007) conducted the research in northern Tanzania and found that the prevalence of smoking among school adolescents was about 3.0 percent and 1.4 percent in male and female adolescents respectively. Moreover, Motiki conducted the study in three regions namely; Dar es Salaam, Arusha and Kilimanjaro between year 2003 and 2007. The study revealed that the prevalence of tobacco uses among adolescents between 13 and 15 years of age increased among girls who smoked in year 2008 compared to those in year 2003. In addition, there was slight decrease in the prevalence among boys. In these studies of prevalence of tobacco use among adolescents of 2003 and 2007, minimum age to start smoking was reported 12 years old.

Adolescent's Health Problems Related to Tobacco Consumption

Many teenagers and adults think that there are no effects of smoking on their bodies until they reach middle age. In fact, there is much serious harm from smoking tobacco (Difranza, *et al.*, 2002). According to Holmer, *et al.*, (2000) conducted the study in Norway on health problems in teenage daily smoker versus nonsmoker, there were no specific health problems were more common in nonsmokers than in daily smokers. Boys and girls who smoked daily reported poorer general health problems such as headaches, neck, shoulder pain, muscle and joint pain, stomachaches, constipation, diarrhea, nausea, frequent heartbeats, and hearing-related disability. The study further reveals that feeling disabled from psychological problems such as nervousness/restlessness, sad, sleep difficulties was also associated with daily smoking in both boys and girls and that bronchitis and/or pneumonia and sinusitis were reported significantly more often by daily smokers of both sexes. Asthma and feeling disabled from physical disease were more common only in girls who smoked daily. Feeling disabled from motion restriction was more common only in boys who smoked daily while daily smokers of both sexes were more likely to have been absent from school and reported to attend more in hospitals.

Furthermore, Gold, *et al.*, (1996) conducted the study in USA on the effects of cigarette smoking on lung function in adolescent boys and girls. The study reported that cigarette smoking was associated with evidence mild airway obstruction and slower growth of lung function in adolescents and those adolescent girls may be more vulnerable than boys to be affected by smoking on the growth of lung function. Adult who commence smoking during adolescence can have lungs that never grow to their potential sizes and never perform at full capacity (U.S. Department of Health and Human Services 2012). Moreover, adolescents smoking tobacco were found in increase the risks of developing on episodes of major depressive disorder (MDD) and drugs abuse/dependence (Brown, *et al.*, 1996). Smoking was linked to 856,000 deaths worldwide from lung, bronchial and tracheal cancers; 184,000 esophageal cancers and 131,000 oral cancers in 2001 (WHO, 2005). Health problems related to the use of tobacco are even less well documented in URT. Below is a table that shows mortality rates from cancer, respiratory and circulatory diseases associated with tobacco smoking in URT.

Table 1: Mortality from cancer, respiratory and circulatory diseases in URT

Disease	Male		Female		Ages
	No	rate	No	rate	
Trachea, lung, and bronchial cancer	22	1.2	0	00	45+
Lip, oral cavity, and pharynx cancer	690	45	405	21.5	45+
Respiratory diseases		-		-	

Source: Ferlay, et al., 2000

The above table reveals that the death caused by cancer due to the use of tobacco products was more common in males than in females. Tobacco smoking seriously threatens sustainable development of the world's poorest nations through disability and premature death. In URT for instance, about 32 percent of all cancers at Ocean Road Institute are associated to tobacco consumption, with the country spending more than \$30 million annually to treat tobacco cancer related diseases (Kagaruki, 2010)

Psychosocial Influence of Smoking Tobacco among Adolescents

Various aspects like social/environment, personal/motives and other social cultural environment may put adolescents in temptation to commence tobacco smoking (Cobb, 2001). The temptation to commence tobacco smoking may be due to an adolescent wanting to establish and develop his/her own identity and autonomy. When adolescents reach the stage of forming self concept, they face identity vis-à-vis role confusion, whereby the major issue is testing things seen from either elders or peers. At this stage adolescent internalize whatever behaviour they consider special or unique to them as observed in significant others. This includes smoking. (Santrock, 2005).

Environment/Social Factors

The Influence of Significant Others on Adolescents' Smoking

The social learning theory emphasizes the importance of the interplay between individual traits and the environment (Santrock, 2005). From observing others, children develop expectations about smoking prior to the intention to smoke. Therefore, much of the epidemiological research on adolescent tobacco use has focused on external behavioural influences. It was initially believed that children copied their parents with regards to smoking or not, but over time it was found that the influence of close friends increased during adolescence (Santrock, 2005). A study of Californian adolescents aged 11 to 16 years was done to examine the correlates of smoking prevalence estimates with the result that observing a best friend smoking accounted for the largest proportion of the variance in prevalence estimates. While the cross-sectional nature of the study meant that causality could not be determined, the researchers concluded that adolescents with smokers in their social networks and schools may be especially susceptible to smoking, because their peers' smoking may give them the impression that smoking is more normal (Unger & Rohr Bach, 2002). Further studies into parental and friends' influence during adolescence used data from the national longitudinal study of adolescent health researchers of which included a survey of 90,000 United States adolescents with a follow-up survey of a core group of almost 10,000 individuals.

This study suggested that smoking by both parents and friends is implicated in adolescent smoking but the influence does not vary by age. A supplementary finding was that an adolescents' smoking is more influenced by a friend smoking than by a parent smoking (Bauman *et al.*, 2001). Peers and parents in a United States study on smoking initiation published in 2004 have given further consideration to the relative contribution of smoking. The four-year longitudinal study of a sample of 812 pre-adolescents looked at three groups of smoking experimenters of different ages, as well as the non-smoking majority, and followed their smoking trajectory. Results revealed that parents smoking predicted membership of the 11 to 12 years-old starters' group, both parents and friends smoking predicted membership of the 12 to 13 years-old starters' group and only friends smoking predicted membership of the 13 to 14 starters' group (Vitaro, 2004). Kiangi (1995) observed a strong association between family members' and friends' use of tobacco among URT adolescents. Adolescents commonly go on errands, such as buying alcohol and tobacco, or light cigarettes for adults, and

possibly traditional society encourages this custom of getting assistance from their children. The lighting of cigarette (s) by the adolescents may partly be attributed to the cost of lighters, which makes it necessary for a smoker to use the kitchen fire. Some research conducted in some parts of URT revealed that “family members” and “friends” use of tobacco positively influences adolescents to smoke (Kiangi, 1995; TGYTS, 2003 and Kaduri, 2009). However, there are many aspects about the relative influence of parents and peers that have remained unresolved by research due to different combinations of predictor variables, the range of methods and populations, and the variety of analytical approaches that have been used (Tyas & Pederson, 1998). What is more, there is a need to explore more the influence of significant others on adolescents smoking. This study therefore explored the influence of significant others on adolescents smoking in Ilala district.

Motives That Drive Adolescents to Smoke Tobacco

Motive refers to that which causes somebody to act in a particular way; a reason (Hornby, 2005). This implies that an individual can act in a particular way because something is behind that action. In the same vein, adolescents engage in health-compromising behaviour like smoking because there is a motive behind that. Studies in the USA revealed that friends smoking, curiosity, stress and boredom were the common reason given for smoking by 223 outpatient adolescents (Tuakli *et al.*, 1990). In addition, becoming adults makes socialization, modernity, affluence, friendship, social norms, sales promotion, and access to tobacco, and lack of anti-tobacco information important reasons why young people worldwide are smokers (Chapman 1995). A qualitative study done by Niknami, Akbari, Ahmadi, Babae-Rouchi and Heidarnia, (2008) observed that experimentation is also an important reason for adolescents to begin tobacco smoking. One adolescent described his experience: “*I tested it because I wanted to know what it is.* [boy, 12 years old] Pg 1294. Furthermore, Niknami *et al.*, (2008) observed that some college adolescents believed that smoking has many perceived advantages (relieves boredom, stress, social anxiety, etc): “*I start smoking whenever I get nervous and I do so with pleasure*” (Experimenting, non-smoker, 13 years old) Pg1297. In addition, reducing frustration was reported as one reason for college adolescents to start smoking tobacco. In a study conducted among 1973 school

children in Nigeria, it was reported that pleasure, fun, relaxation, friends who smoke, concentration and nervousness are the reasons for adolescents to indulge in smoking (Elegbeleye and Femi-pearse, 1976). In URT, a cross-survey of 2869 pupils in Hai, Moshi rural, Kilombero, Morogoro rural, Temeke, and Kinondoni district, 61.8 percent of adolescents reported experimenting, 20.8 percent of adolescents reported persuasion, 8.2 percent of adolescents reported relaxation and 9.9 percent reported relief of anxiety, keeping oneself busy, or solving a problem (Kiangi, 1995). In the Tanzanian context, information about motives for adolescents to smoke is limited, as only a few districts such as Kinondoni, Temeke, Hai, Moshi Rural, Kilombero and Morogoro Rural districts have explained why adolescents begin smoking. However, they have provided only general results without specifying the results in each district. Thus, it may prove difficult to get the whole picture on motives that drive adolescents to take up smoking in each district. Data on influence of tobacco smoking among Tanzanian adolescents are scattered and are not nationally representative. Thus, it seems necessary to get data of the complete picture on influence of smoking among adolescents by region. For instance, in Dar es Salaam region available information shows that research on influence of smoking among secondary school adolescents specifically significant others and motives has been done in two districts namely, Kinondoni and Temeke only. However, in Ilala district, the available data show there is a higher prevalence of tobacco smoking than in Temeke and Kinondoni although there is paucity information about the influence of significant others and motives that drives adolescents to smoke. Hence this paper presents the exploration of the influence of tobacco smoking specifically significant others and motives that drives adolescents to smoke among secondary school adolescents in Ilala district.

Materials and Methods

The Ilala district of Dar es salaam region was selected for the study due to the fact that it shows high prevalence of smoking tobacco among adolescents compared to other districts namely Temeke and Kinondoni (Jagoe *et al*, 2002; Kaduri, 2008; and Kida;2010). Another reason for selecting Ilala was that, significant others and motives that drive adolescents to smoke have hardly been investigated as compared with other districts, namely Temeke and Kinondoni. A cross-sectional survey design was

considered to meet the demands of the study because it allowed the collection of various data from secondary school adolescents with different socio-demographic characteristics, such as age and form (grade level). It also helped in the collection of information on adolescents' influence of significant others and motives that drive to smoke tobacco within a relatively short period of time and at one point of time (Gay, Mills, & Airrasinan, 2006). Simple random sampling was employed in the selection of schools and participants for the study. This was to ensure an equal chance of selection and representation of participants in the study at school and form levels (Leedy & Ormord, 2001). Four secondary schools were selected namely Jamhuri, Benjamini Mkapa, Pugu and Dar Es Salaam, to make a sample of four schools from eighty-five schools in Ilala district. An assumption was made that all the schools had the same characteristics in terms of the study variables. The study comprised 400 adolescents (form I to IV). Form one to form four students of all schools have a minimum age of 12 years and a maximum age of 22. The mean and standard deviation of age was found to be 16.65 and 1.68 respectively. This study used the questionnaire as an instrument of data collection. Since smoking is prohibited by school rules and regulations, it was difficult to use interviews or other methods of data collection because students (especially tobacco smokers) were expected to be afraid to participate freely in the interview or other data collection methods that could have identified them. The data obtained through questionnaires were coded and total scores computed. Statistical Package for the Social Sciences (SPSS) version 15.0 was employed in the data analysis. From the SPSS, frequencies, descriptive statistics, were obtained.

Findings and Discussion

The Influence of Significant Others on Adolescents' Smoking

Out of 400 participants, 246 (61.5 percent) reported to be non smokers while 154 (38.5) reported having smoked. The following table summarizes the findings which are presented in terms of frequencies and percentages.

Table 2. Frequency on the influence of significant others on adolescents smoking among secondary school in Ilala district (N=400)

Significant others	Frequency	Percent
Close friend	67	16.8
Sister	2	0.5
Brother	25	6.3
Father	5	1.3
Mother	3	0.5
Not influenced by significant others	52	12.5
Non-smoker	246	61.5

The findings revealed that 16.8 percent (refer to table 2) of adolescents were influenced by their close friend. From these findings significant others especially close friends appear to be the most influential in causing adolescents to smoke. The influence may occur through observational learning (vicarious) whereby adolescents may observe their close friends' tobacco smoking, which in turn influences them to commence smoking. The influence may also occur through persuasion whereby non-smoking adolescents are asked by their close friends to smoke a cigarette, and it is possible that non-smoking adolescents are told by their close friends about the advantages of tobacco.

As mentioned earlier, close friends played a significant role in influencing adolescents to commence smoking. It therefore seems that adolescents shift of attention from parent to peers, influence of peers, the accessibility of health-damaging material and opportunities in risk situations increase the likelihood of their involvement in non-conventional and health-compromising behaviours including tobacco smoking. The findings on the influence of close friends on tobacco smoking among secondary school adolescents in Ilala are consistent with other previous studies. For instance, Alexander *et al.* (2001) found smoking to be linked with peers' network in which at least half of

their members smoked, one or two best friends smoked and smoking was common in school. Moreover, Unger and Rohrbach (2002) concluded that adolescents with smokers in their social network and school may be especially susceptible to smoking because their peers smoking may give them the impression that smoking is more normal. However, Vitaro, (2004) found that parents' smoking predicted membership of the 11 to 12 years old starter trajectory group, both parents and friends smoking predicted membership in the age 12 to 13 years old starters' group and only friend smoking predicted membership of the 13-14 years old starters' group. The inconsistency in results might be due to different sample sizes, contexts, or the objectives of the studies and research design. Interestingly, this study revealed that significant others, especially *brothers*, also appeared to influence secondary school adolescents to start smoking. Among 18 percent of adolescents who lived with their brothers who smoked tobacco, 6.3 percent (refer to table 4) reported being influenced by their brothers to smoke tobacco. In the same manner, among 9 percent of adolescents who lived with their sisters who smoked tobacco, only 0.5 percent reported being influenced to tobacco smoking by their sisters. This implies that adolescents whose brothers smoke cigarettes had a higher risk in engaging in tobacco smoking than the adolescents whose sisters smoke cigarettes.

This implication might emanate from social normative behaviours among traditional societies. For instance, in URT it has been observed that smoking by men seems to be accepted, and it is strange to find women smoking a cigarette, though a few women are smokers of tobacco (refer prevalence of tobacco smoking among adolescents in URT); that is why the findings revealed that brothers had a stronger influence than sisters in influencing secondary school adolescents in Ilala district to smoke. This observation is hardly documented in other studies. It is therefore imperative to educate societies that tobacco smoking has adverse effects on both males and females. This study found that *father* and *mother* influenced secondary school adolescents in Ilala district to smoke. Out of 4.3 percent of adolescents who reported living with their mothers who smoked tobacco, 0.8 percent reported being influenced by their mothers to smoke. Similarly, out of 12 percent adolescents who reported living with their fathers who smoked tobacco, 1.3 percent reported being influenced by their fathers to smoke tobacco. This implies

that paternal influence was stronger than maternal influence in causing secondary school adolescents in Ilala to smoke. This is in line with Kandel and Wu (1995) who argue that adolescents whose parents smoked were likely to be smokers than were adolescents whose parents did not smoke. In contrast, the findings differ from the study reported by Santrock (2005) which revealed maternal smoking was more strongly related to smoking by young adolescents, especially girls, than paternal smoking. The differences in results from various studies might be due to the different contexts in which the studies were conducted or the different research methodologies employed. However, 12.5 percent of tobacco smoking adolescents in Ilala district reported they were never influenced by significant others. They may have instead been influenced by other factors, like motives, Self efficacy and self-esteem. Generally, family and peers are important factors in adolescents' lives. Garbarino, Abramowitz, Asp, Ebata, Galambos, Gamble, Garbarino, Kaus, Kelly, Schellenbach, Sculenberg, Sebes, & Vondra, (1985) noted that the family often plays an important role in the etiology of personal and social problems. It is undoubtedly the case that at the micro-systemic level family and peers are important factors in adolescents' lives. The adolescent is seen as an active shaper of his or her own experience, making it unwise, for example, to blame parents or family for all the adolescent's troubles.

Furthermore, the greatest risk for disturbed development comes from situations in which there is a powerfully pathogenic meso-system – for example, when both home and peer group reward delinquent behaviour. Apart from that, during adolescence, adolescents' exploration of their identity is at a peak. This puts young people in a very vulnerable position, and makes them extremely sensitive to the norms, conventions and feedback provided by the peer group. If the peer system provides them with positive feedback regarding their personal identity expressions, they will try to maintain the norms and values of the system (Lugoe, 1996). If adolescents receive negative feedback from their peer system regarding their personal identity expressions, according to Harter (1999), they react in three ways. First, they may try to change themselves to fit into the peer system. In the case of tobacco use this would mean having a positive attitude towards tobacco smoking and possibly undergoing smoking initiation. Secondly, adolescents may try to change the peer system, or thirdly, they might even place themselves (and

their values) outside the peer system completely, and become loners. Furthermore, adolescence is a time of transition. Adolescence forms a bridge between the relatively sheltered environment of childhood and the role of adulthood. Adolescents begin to confirm their own identities and emulate adult roles. There is a heightened awareness of role models and a tendency to establish boundaries through experimentation and experiencing new risks (Santrock 2002). Since ongoing secondary school adolescents in Ilala district spend much time in the school environment, it is obvious that they interact with their close friends who smoke tobacco, which in turn causes them to take up smoking. Therefore, it is suggested that, due to the increasingly complex nature of society, early socialization needs to build the capacity for communication, and making decisions for healthy behaviour and learning.

Motives That Drive Adolescents to Smoke

This study also aimed at identifying motives that drive adolescents to smoke tobacco.

Table 3 presents the summary of results identifying various motives that drive adolescents to smoke in Ilala district.

Table 3: Frequency on motives for smoking by secondary school adolescents in Ilala

Motive	Frequency	Percent
Experimentation	33	8.3
A way of keeping busy	4	1.0
A way of solving problem	8	2.0
Reduce frustration	26	6.5
Feel pleasure	29	7.3
To relax	18	4.5
Persuaded to smoke	22	5.5
Sent to light cigarette	14	3.5
Never smoked	246	61.5

The above table shows that the foremost motive which leads secondary school adolescents to smoke tobacco was *experimentation*, whereby about 8 percent reported smoking so as to test it. This implies that the majority of secondary school adolescents who had smoked in Ilala district did so because they just wanted to test it out. During adolescence experimenting with a wide range of behaviours including smoking becomes prominent. Experimentation occurs after observing significant others who smoke

cigarettes and as a result adolescents copy them. This can be explained by the social cognitive perspective of human development that provides a multidimensional view on various factors influencing adolescents' behaviour (Bandura 1986). This perspective highlights the interaction between the person and the environment, and therefore factors influencing adolescents' tobacco use. Thus, a person is most directly influenced by his or her immediate environment, which for most adolescents will include the home, family and peers. Generally, various stimuli from the environment may motivate adolescents to experiment, which in turn will become part and parcel of behaviour. Smoking in public places is strongly recommended to be prohibited in order to avoid adolescents copying the behaviour and finally becoming active smokers. The observation that experimentation is the foremost reason for secondary school adolescents in Ilala district to smoke tobacco is consistent with previous studies. Kiangi, (1995) reported that the main reason for adolescents smoking was experimenting (61.8 percent). Furthermore, another qualitative study conducted by Niknami *et al*, (2008) found similar results.

However, slight differences have been observed, especially in the study done by Kiangi (1995) which presented a higher percent of experimenting than the present study, while the study done by Niknami *et al*, (2008) did not show how many percent of participants reported that they smoked because they wanted to experiment. The differences which appear in these studies may be attributed to the methodologies employed by the studies. For example, Kiangi (1995) and this study obtained data using the quantitative approach, while Niknami *et al*, (2008) obtained data from the qualitative approach. These findings support the developmental action theory and in this case the goals of tobacco smoking may have been shaped by the experiences a young person has had in the context of everyday life. These experiences in turn are influenced by age-related normative expectations on the part of society, in which adolescence is seen as a time of experimentation (Moffit, 1993; Shedler and Block, 1990). Generally, the desire to experience tobacco has been seen as a form of goal-directed learned behaviour for a person who values new experiences (Jessor, 1987). This study identified *pleasure* as another motive that drives adolescents to smoke in Ilala district. About 7 percent of adolescents (refer to table 3) were reported to smoke tobacco because they wanted to

experience pleasure. It is believed that tobacco contains amounts of nicotine which stimulate the user to feel pleasure after use and also it is one of appetitive substances (Choi, *et al.*, 1997). In most cases it might be difficult for adolescents to stop smoking tobacco they have started and they might continue smoking in the future. These findings are consistent with a previous study conducted among 1973 school children in Nigeria where Elegbeleye and Femi-Pearse (1976) reported pleasure to be among the reasons for adolescents starting to smoke tobacco. In addition, Novacek, Raskin, & Hogan, (1991) found that pleasure appeared to be the main reason for adolescents to smoke tobacco. Therefore, this study suggests that a conducive environment should be provided especially at school and home where adolescents interact a lot. For example, various activities should be encouraged at school and home, and should be designed in a way that they will capture adolescents' interest which in turn will provide them with pleasure, so that they are not tempted to smoke tobacco.

Reducing frustration was found to be among the main motives that drive secondary school adolescents in Ilala district to smoke cigarettes. 6.5 percent (refer to table 3) of those who had smoked did so in order to reduce frustration. This implies that some adolescent smokers in Ilala district experience various problems which make them frustrated and as a result perceived tobacco smoking a good way to reduce frustration. Similar findings were reported by Niknami *et al.*, (2008) who quoted one of his respondents as follows;

“I know that once I have graduated from university I will not be able to find a job and I won't know what to do. My family will not be able to help and I don't know who I would have to turn to for a job”. I don't want to worry; I want to clear my mind, so I start smoking [Smoker, male, 22 years]”

The fact that reducing frustration was revealed to be a motive that drives some secondary school adolescents in Ilala district to smoke, raises a concern about the effects of social structures of the society that may put an adolescent at risk of smoking. A society that is unable to realize the common values of their residents or solve their commonly experienced problems, such as lack of social bonds, joblessness, unhealthy role models for youth, unhealthy social environment and feelings of frustration and injustice may cause a higher rate of tobacco smoking among adolescents. Therefore, this

study suggests that proper guidance and counselling should be provided at home and school, which will enable adolescents to acquire a proper approach so as reduce frustration and cope with various situations. 5.5 percent of adolescents (refer to table 3) who had smoked in Ilala district reported having been *persuaded to smoke* cigarettes. Although the results do not show who was responsible for persuading adolescents to smoke, the study may rely on the influence of significant others in explaining who is in fact responsible for persuading. According to the findings about 17 percents of adolescents reported that close friends influenced them to smoke tobacco. The influence to smoke therefore may occur through persuasion or observation. With respect to findings, secondary school adolescents who reported to have been persuaded to smoke may have been told by their close friends about the advantages of tobacco smoking and this in turn encouraged them to indulge in tobacco smoking. Also it should be noted that persuasion does not occur unless the persuaded person agrees with that information which seems to be beneficial to him/her. Similar findings were revealed by Kiangi (1995), whereby 20.8 percent adolescents were reported to have been persuaded to smoke tobacco. This study therefore suggests that proper education focusing on the problems relating to tobacco smoking should be introduced at school level to enable students acquire proper knowledge of the problems tobacco causes so they may be persuaded to avoid smoking tobacco.

This study further revealed that 4.5 percent of adolescent (refer to table 3) smokers in Ilala district reported that they smoked tobacco in order *to relax*. About 2.0 percent and 6.5 percent adolescent smokers reported that *solving problems* and *reducing frustration respectively* drive them to smoke cigarettes. Hence, it is possible that adolescent smokers commence smoking so as to get rid of problems or reduce frustration. In other words, adolescent smoked tobacco when they wanted to become calmer and less worried. Similar findings were found by Kiangi (1995), whereby 8.2 percent of adolescents, smoke tobacco because they wanted to feel relaxed. On the same lines, a study conducted among 1973 school children in Nigeria, Elegbeleye and Femi-Pearse (1976) reported relaxation being the motive for tobacco smoking. Interestingly, this study revealed that *being sent to light up cigarettes* was among the motives that drive adolescents to commence cigarette smoking. About 3.5 percent of adolescent smokers

were found to belong in this category. This motive is hardly mentioned in previous studies possibly due to the fact that most of them were not conducted in traditional societies where adults encourage the habit of sending children to buy or to light up cigarettes. Kiangi (1995) found that nearly 31.8 percent of the adolescents reported to have been sent by their parents to buy tobacco and 41.8 percent having been asked to light a cigarette. Nevertheless, Kiangi (1995) did not mention whether *being asked to light up a cigarette* or *being sent to buy a tobacco product* are motives that drive adolescents to smoke tobacco. The custom of parents sending their children to collect or to buy various day-to-day requirements for their family is common in traditional societies (WHO, 2005). Expectations and adults' pride of getting assistance from their young people in traditional societies possibly encourage this custom, which in turn may tempt an adolescent to commence smoking tobacco. Hence this study suggests that proper education should be provided to the Tanzanian community about the disadvantages of involving children/adolescents in buying tobacco products. In addition, the government should prepare by-laws to restrict the buying or selling of tobacco products by children/adolescents

1.0 and 2.2 percent of adolescents (refer to table 3) reported to smoke tobacco as *a way of solving problems* and *a way of keeping busy*, respectively, which implies that these motives were not strong in encouraging secondary school adolescents in Ilala district to smoke. Similar findings were revealed by Kiangi, (1995) whereby 9.9 percent of adolescents reported smoking tobacco to solve problems and as a way of keeping busy. Differences in the results of the studies might be caused by the research methodology, such as sample size, area of the study, and demographic characteristics. Generally, it has been observed that experimentation is the foremost motive which drives adolescents to smoke tobacco although other motives like, a way of keeping busy, reducing frustration, a way of solving problems, feeling pleasure, relaxing, and being persuaded, were also revealed. Thus, this study supports the tenet that adolescence is a critical period during which young people, at a time of rapid physical and psychological development, begin to give meaningful shape to their private experiences of being an individual, and are willing and able to decide about their own actions (Santrock, 2005).

Conclusion and Recommendation

This study found that the reasons for secondary school adolescents in Ilala district to smoke are determined by significant others and various motives. Special attention should be paid to significant others (e.g. closed friends and brother) and motives (e.g. experimentation, reduce frustration, feel pleasure, persuaded to smoke, relax and sent to light up a cigarette) since they are confirmed to be strong determinants of smoking among secondary school adolescents in Ilala district. With regards to controlling the role played by significant others in influencing secondary schools' adolescents in Ilala district to smoke tobacco, proper education, persuasion, motivation and facilitation need to be in place. Educational programs should be implemented to spread appropriate knowledge and skills for adolescents to resist pressure from significant others. Additionally, adolescents have to be motivated and empowered for behaviour change. At school level, proper guidance and counselling services and recreational activities should be introduced.

This is due to the fact that some secondary school adolescents in Ilala district view smoking tobacco as pleasurable, something that reduces frustration and helps a person to relax. This implies that adolescents experience various problems which seem to be very difficult for them and perceive tobacco smoking as a way to get relief. It is imperative for counsellors at the school level to render counselling services which can help adolescents to cope with stress which in turn would reduce the possibility of adolescent engaging in tobacco smoking. In addition, recreational activities such as sports should be introduced at school to enable students to be physically fit and also reduce stress. At the home level, parents and guardians should have good communication with adolescents so as to discover habits that may prove difficult to discover in a poor communication environment. Moreover, various efforts should be made to abolish the habit of adults sending their children to light up cigarettes. The efforts may include enacting laws or by-laws that will prohibit adolescents from being involved in activities associated with tobacco smoking. The need to prevent secondary school adolescents in Ilala district and elsewhere in URT from smoking is obvious. Comprehensive but cautious preventive activities should be developed and tested for their effectiveness. The quality of planning appears to be necessary for developing

sound measures to prevent smoking. Three levels of intervention, namely; individual, community, and national are recommended.

REFERENCES

- Alexander, C., Piazza, M., Mekos, D., and Valente, T (2001). “Peers, schools, and adolescent cigarette smoking”, *Journal of Adolescent Health*, 29(10), 22–30.
- Bandura, A. (1986). *Social Foundation of Thought and Action: A social cognitive theory* New York, Prentice Hall
- Baumrind, D. (1991). “Effective Parenting During the Early Adolescent Transition” *Advances in Family Research*, 2(10), 111-163
- Brown, R. A., Lewinsohn, P.M., Seeley, J.R., Wagner, E.F., 1996. Cigarette smoking, major depression, and other psychiatric disorders among adolescents. *Journal of American Academy. Child -Adolescent. Psychiatry.* 35, 1602–1610.
- Choi, W. S., Patten, C. A., Gillin, J. C., Kaplan, R. M., and Pierce, J. P. (1997) “Cigarette Smoking Predicts Development of Depressive Symptoms Among USA adolescents” *Pubmed* 19 (1),42-50
- Cobb N, J (2001), *Adolescence: Continuity, Change, and Diversity*, New York, May field
- Difranza, J. R., Savageau, A. J., Rigitti, A. N., Fletcher, K., McNeill, D. A., Coleman M., and Wood. (2002) development of symptoms of tobacco dependence in youth: 30 month follow up data from DANDY study”, *tobacco control*, 11, 228-235
- Drope, J. (2011) *Tobacco Control in Africa*, New York, Wimbledon publishing company
- Elegbeleye, OO and Femi-Pearse D. (1976)” Incidence and variables contributing to onset of cigarette smoking among secondary school children and medical students in Lagos, Nigeria”, *Br J Prev Soc Med.* 30 (1),66–70
- Feldman, R. (1997), *Introduction to psychology*, New York, McGraw-Hill

- Ferlay J, Bray F, Pisani P, et al. *GLOBOCAN 2000: cancer incidence, mortality and prevalence worldwide*, version 1.0. IARC Cancer Base No. 5. Lyon: IARC, 2001.
- Garbarino, J., Abramowitz, R., Asp, E., Ebata, A., Galambos, N., Gamble, W., Garbarino, A., Kaus, C., Kelly, A., Schellenbach, C., Sculenberg, J., Sebes, J. and Vondra, J (1985). *Adolescent Development*, Columbus, Charles E. Merrill Publishing Company
- Gay, L. R., Mills, E. G and Airasian, P (2006), *Educational Research: competencies for Analysis and Application*. Ohio, Merrill: Prentice Hall
- Global Youth Tobacco Survey Dar Es Salaam (2003), *smoking tobacco*, www.cdc.gov/tobaccohtm retrieved on Wednesday 27th September, 2006,
- Gold, R. D., Wang, X., Wypij, D., Speizer, F., Ware, H. J., and Dockery, W. D. (1996). "Effects of Cigarette smoking on lung Functioning in Adolescents Boys and Girls", *The New England Journal of Medicine*, 335:931-937
- Harter, S. (1999), *the Construction of the Self: A Developmental Perspective*, New York, Guildford
- Holmen, L. T., Barrett-Connor, E., Holmen, J., and Bjerner, R. (2000) "Health Problems in Teenage Daily Smokers versus Nonsmokers" *American journal of epidemiology* 151 (2), 148-150
- Hornby, A. S. (2005). *Oxford Advanced Learner's Dictionary of Current English (seventh edition)*, New York, Oxford University press.
- Jagoe, K., Edwards, R., Mugusi, F., Whiting and Unwin, N. (2002), "Tobacco smoking in Tanzania, East Africa: population based smoking prevalence using alveolar expired carbon monoxide as a validation tool", *Tobacco Control*, 18 (13), 210-214
- Jessor, R. (1987), "Problem-Behaviour Theory, Psychosocial Development, and Adolescent Problem Drinking", *British Journal of Addiction*, 82 (10), 331-342.
- Kaduri, A. P. (2008). Social Cognitive determinants of smoking behaviour among junior secondary schools students in Kinondoni district. Masters dissertation (Unpublished), Muhimbili University and Allied Sciences
- Kagaruki, G.B. (2010) *Application of evidence-based health information system for effective supply chain of essential medicine in Tanzania: A Case Study of Rungwe*

District and Mbeya City. MSc Dissertation, University of Dar es Salaam, Tanzania

- Kiangi, G. (1995). *Tobacco and alcohol use among adolescents in primary school in Tanzania*. PhD.Thesis, (Unpublished), University of Kuopio, Finland.
- Kida, I. A., Manyori, C. & Masalu, J. R. (2010) Prevalence and correlates of perceived oral malodor among adolescents in Temeke district, Dar es Salaam. *East African Journal of Public Health*, 7: 49-53.
- Kindle, D.B., and Wu, P (1995), “The contribution of mothers and fathers to the Intergenerational transmission of cigarette smoking”, *Journal of Research on Adolescence*, 5 (25), 225-252 York, Oxford University Press
- Koval, J.J., and Pederson, L.L. (1999), “Stress-coping and other psychosocial risk factors: A model for smoking in grade 6 students” *Addictive Behaviours*, 24(27), 207–218
- Lugoe, W. L. (1996). *Prediction of Tanzanian Students” HIV Risk and preventive Behaviours*. PhD thesis (unpublished), University of Bergen, Norway.
- Niknami, M. Akbari, F. Ahmadi, G. Babaee-Rouchi and. Heidarnia, A (2008). “Smoking initiation among Iranian adolescents: a qualitative study”*Eastern Mediterranean Health Journal*, 14 (6), 1290-1300.
- Novacek, J., Raskin, R. and Hogan, R (1991), “Why Do Adolescents Use Drugs? Age, Sex, and User Differences”, *Journal of Youth and Adolescence*, 20 (12), 475-492
- Moffit, T. (1993). “Adolescence-Limited and Life-Course-Persistent Antisocial Behaviour:A Developmental Taxonomy”*Psychological Review*, 100 (39), 674-701
- Mokiti, F. (2009). “Prevalence of tobacco use among adolescents in three districts”. unpublished report.
- Mshiu E. M. and Siza J., (2007). “Adolescent risk behaviour initiation: Factors influencing cigarette smoking and alcohol intake among primary school adolescents in Moshi Rural District, Tanzania”, unpublished report.
- Pederson, L.L., Koval, J.J., McGrady, G.A., and Tyas, S.L (1998), “The degree and type of relationship between psychosocial variables and smoking status for students in grade 8: Is there a dose-response relationship? *Preventative Medicine*, 27 (16), 337–347
- Santrock, J.W (2005), *Adolescence (tenth edition)*, New York, McGraw-Hill

- Santrock, J.W (2002), *Adolescence (eighth edition)*, New York, McGraw-Hill
- Shedler, J. and Block, J (1990). “Adolescent Drug Use and Psychological Health”
American Psychologist, 45(14), 612-633.
- Taylor, S. E. (2003). *Health Psychology (fifth edition)*, New York, McGraw-Hill
- Tuakli, N., Smith, M. A. and Heaton, C. (1990) Smoking in adolescence: methods for health education and smoking cessation. A MIRNET Study. *Journal of Family Practice*, 31, 369–374.
- Tyas, S., and Pederson, L (1998). “Psychosocial factors related to adolescent smoking: a Critical Review of the literature”, *Tobacco Control*, 7 (5), 409-420
- Unger, J., and Rohrbach L (2002). “Why do adolescents overestimate their peers” smoking prevalence? Correlates of prevalence estimates among California 8th grade students”, *Journal of Youth and Adolescence*, 31 (2), 147-153
- U.S. Department of Health and Human Services (2012). *Preventing Tobacco Use among Youth and Young Adults: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2012
- Vitaro, F. (2004). “Differential contribution of parents and friends to smoking: Patterns and Causes of Gender Differences in Smoking” *Social Science and Medicine*, 32 (9),989-1005
- World Health Organization (1999): Combating the Tobacco Epidemic. *The World Health Report*. Geneva 1999.
- WHO, (2005). “Gender in Lung Cancer and Smoking Research”*Epidemiology*,3(7), 1-43.