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Risky Health Behaviors among Albanian Youths: Smoking, Drinking, Body Mass Index (BMI) and their Correlates

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Abstract: ***Aim: This paper presents an analysis of the prevalence, age distribution and selected socio-economic correlates of smoking, alcohol drinking and BMI among 15-25 years old in Albania. Subjects and methods: The work is based on a representative sample of the Albanian population between ages 15-24 years. Results: For all three risk factors, the prevalence of exposure among men is much higher compared to that among women. Prevalence of alcohol drinking and smoking is more than 6 times higher among men (around 19%) compared to women. Twenty four percent of men and 11% of women are overweight or obese. Ten percent of women are underweight. Among men, drinking prevalence is highest among married individuals. Among women, smoking is associated with urban residency. Smoking prevalence in women of the age-group 20-24 is two to three times higher compared to ages 25-49. Conclusions: The result of this study are addressing to policymaker of Albania government.***

Keywords: Risky behaviours, social determinants, youth, obesity, smoking, alcohol

1. Definition of the Problem

There are a number of lifestyle choices made by young people that can increase the risk of disease as well as lower life expectancy. During adolescence and young adulthood, people experience important biological, physical, cognitive and social transitions. This age group faces many challenges and the decisions they make can influence the quality and length of their lives over the long term. Some of them leave school and look for jobs, others leave their parents' households and build new families of their own. Many important life style choices, which may include unhealthy behaviors, are established during the transition from childhood to adulthood.

In this paper, the terms "youth," "adolescents," and "young people" are all used to describe people in the stage of life that marks the transition from childhood to adulthood. The World Health Organization (WHO) defines "adolescents" as people in the age group 10-19; "youth" as those in the age group 15-24; and "young people" as those in the age group 10-24 (WHO, 2000). Defining this stage by age groups has several advantages. Specifically, indicators based on age can be compared across countries and cultures. However, for some authors the definitions are limited in that the transition to adulthood can continue well past the age of 24 years (Arnett, 2000; Furstenberg 2002; Settersten 2003). The broad definition of youth can, more realistically, be described as the developmental timeframe bridging the period of transition from child to adult. Throughout this paper, the WHO's definition of "youth," as those aged 15-24, is used. As the dataset analyzed here has information only from respondents older than 14 years of age, the term "adolescent" is used here to refer to respondents aged 15-19.

To find a concise definition for risky behaviour is difficult, as there exist many forms, and they have complex and varied causes. The common and binding element of all these types of behaviours is the fact that young people expose their lives and bodies to risk, in many cases, well aware of a possibly negative outcome. Risky behaviors can be expressed in several unhealthy lifestyle choices, ranging from tobacco use to drinking and driving, and even sexual behavior (Ellis, et al., 2011), while their impact on health can be manifested through increasing the risks for encountering conditions such as cardiovascular disease, cancer, poor mental health, and sexually transmitted diseases.

In this paper we focus on three health risks – smoking tobacco, drinking alcohol, and unhealthy body weight. Smoking tobacco may begin early in life, but the numerous health consequences of tobacco smoking, including cancer and coronary heart diseases, become evident only late in adulthood or even later in old age. Like tobacco smoking, alcohol use may originate in young age and can easily develop into substance abuse, dependence, and further into chronic disease, whereas, when such behavior is associated with driving, it dramatically raises the risk for accidents and premature death. There are several reports demonstrating that non-communicable diseases are increasing in Albania; these increases cannot only be explained by demographic

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transition (WHO 2006; GLOBOCAN 2008; INSTAT 2009). Important modifiable risk factors for non-communicable diseases are weight problems, such as being overweight or obesity. These risk factors can be triggered by unhealthy eating and/or a sedentary lifestyle. Being underweight may also be a risk factor for some health conditions such as anemia.

Young people face new challenges and problems that former Albanian generations did not experience (France 2000). A theoretical perspective that is relevant for understanding how the many systemic changes that are occurring in Albania are also affecting youth behaviour, is that of the bioecological model of development (Bronfenbrenner, 1979; Bronfenbrenner and Morris, 2006). The bioecological model (Bronfenbrenner & Morris, 2006) posits that individuals develop within a series of nested contexts, including proximal environments such as family and more distal environments such as national culture or governmental policies. According to Bronfenbrenner & Morris (2006), within an ecological context, developmental outcomes will be influenced mostly by interactions among the individual, environment, and the many systems within that environment. In Albania, many overall lifestyle changes have occurred due to political and social reform that occurred in the 1990s and 2000s; there are indications that traditional social institutions and networks are getting weaker and that values are being transformed (UNICEF, 2004). While young people now appear to have more opportunities and choices than their parents did, they face more risk as well. Young people now spend more time in school, live in smaller households (due to the fertility transition), and have greater access to mass media and more freedom of movement. Due to economic and political transition, young people are also now living in conditions where the educational and family systems have changed substantially. (UNICEF, 2004). Despite some seemingly positive changes, young people still face numerous social and economic challenges (UNICEF, 2004).

Individual motivation for undertaking unhealthy or risky behaviour may be present as well as the increased likelihood during adolescence to be more susceptible to peer influence. Many authors argue for gradual brain development through these years as one potential explanation for the desire for high risk activity (Albert et al., 2013, Chein, et al., 2011; Steinberg et al., 2008) Many youth are not “stepping on the brakes” even if they know an activity may be dangerous because emotionally arousing situations are difficult to decline. Specifically, due to the slower process of neurobehavioral maturation during teen years (Dahl, 2008). Therefore, many youth are drawn to psychologically rewarding new experiences without considering long-term consequences (Le Breton 2000). These seemingly psychologically rewarding experiences, such as smoking, bad eating behaviors, and risky driving can have potentially damaging and life-altering long-term consequences.

Additionally, there can be a number of social and demographic determinants, which may increase the chances in different communities for young people to start taking risks with unhealthy lifestyles (Ellis et al, 2011, Singh 2010; Kanaan 2009; Awusabo-Asare 2008). In this paper, we investigate the effects of seven socioeconomic and demographic correlates: age, marital status, place of residence, education, employment, region and wealth on three indicators of risky youth health behaviours (smoking, drinking, and weight). We analyse the correlates among these variables using recent data from the Albanian Demographic and Health Survey (ADHS), which was fielded in a nationally representative sample of the population in 2008 and 2009.

2. State of knowledge about youth risky behaviors in Albania

Recently, there has been an increased demand from Albanian policymakers, program managers, and NGOs to research risky lifestyles among youth (UNICEF, 2004). A number of national school surveys covering different age categories and a range of risky behaviors have already been carried out. Nevertheless, there are very few studies on these topics presenting an in-depth analysis based on representative national samples.

There are very little data and published research on youth risky behaviours in Albania. Two youth risky behaviour surveys carried out by the Institute of Public Health cover only secondary school students (14-18 years of age), and no results have yet been published. Another recent survey on health behaviours among school children provides data only on primary-school children, and no publication is available yet. Some publications on tobacco, alcohol and overweight prevalence have focused either only on population age 25 or older or on those in university school settings (Ross 2008; Shapo 2003 Vakefliu 2002). Furthermore, because of logistic difficulties to access rural and mountainous areas in Albania, there has been a tendency for the existing data to represent the urban population more than the rural population.

There are few publications by Albanian or foreign authors concerning risk exposures of children and adolescents in Albania (Borici 2009; Sujoldzic 2007), but in addition to some of the limitations of representativeness mentioned above, their objective is on providing international comparisons and finding cross-cultural differences rather than exploring in-country differentials and associations.

For these reasons and because the ADHS survey was fielded recently and provides the best representative sample of the Albanian population, the authors believe that this work will provide reliable baseline data regarding the selected risky behaviours among Albanian youth.

This paper aims to provide representative, recent data on the prevalence of tobacco use, alcohol use, weight problems, and obesity among Albanian youth, to contribute to the published information and to provide a foundation for further comparisons over time and across geographical areas. Distribution patterns and associations with selected correlates are investigated as well. The findings are expected to influence health and social policy modifications in the country with evidence-based information and to foster the development of cost-effective approaches from the

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government and other organizations that would promote a healthier lifestyle adoption among Albanian youth.

3. Data and Methods

We use data from the Albanian Demographic and Health Survey (ADHS, 2009), which was carried out in 2008-2009 in a nationally representative sample of 7,584 women and 3,013 men aged 15-49. The survey was conducted by the Institute of Statistics (INSTAT) and the Institute of Public Health (IPH).

The ADHS sample was selected in such a manner as to allow separate urban and rural, as well as regional-level estimates for key population and health indicators. A two-stage sample design was utilized. The first stage involved selection of a sample of primary sampling units (PSUs) from the PSUs used for the 2008 Living Standards Measurement Study (LSMS). The ADHS survey selected 20 households from the updated household listing in each PSU, excluding those households selected for the LSMS. After selection of the households, the sample selection forms were printed and the list of selected households was adapted for use by means of a Personal Digital Assistant (PDA).

All women age 15-49 in the total sample of households, and all men age 15-49 in the subsample of half of the households, who were either usual residents of the households or visitors present in the household on the night before the survey, were eligible to be interviewed. Three questionnaires were used for collecting data from the ADHS together with a number of examinations and measurements including weight and height. These two measurements were necessary for calculating body mass index (BMI). The measurements were carried out at household settings.

For this paper, we focus on youth, the age group from 15-24, for both women and men, but we sometimes compare this age group to those aged 25-49. There were 2,471 females and 1,055 males aged 15-24 years old in the ADHS sample. First, the data regarding school attendance, employment and marital status are analyzed and the social transition taking place among Albanian youth is described. The paper then investigates tobacco smoking, alcohol drinking and weight problems among youth, and examines how their incidence varies with age and sex and with variables that might influence such exposures.

These indicators are based on definitions proposed by WHO and by experience of analyses of Demographic Health Survey (DHS) data from other countries. The indicators of risk factors that we consider are described in detail in Table 1. For each of these indicators we assess variations by single years of age between 15 and 24 years, and we compare the average for ages 15-24 to that for people aged 25-49.

Table 1: Questionnaire Format for tobacco smoking, alcohol drinking and BMI variables

Risky behaviour indicators	*Categories used in descriptive analyses and multivariate analyses*	*Description of the indicators*
Consuming alcohol	*Descriptive:* No alcohol Less than once per month 1-3 days per month 1 or more days per week *Multivariate:* Less than once per week At least once per week	The following closed question was asked: In the last 12 months, how frequently have you had at least one drink? 5 or more days per week 1-4 days per week 1-3 days per month less than once a month
Smoking tobacco	*Descriptive:* No use of tobacco Other tobacco than cigarettes 9 or less cig. in the past 24 hours 10 or more cig. in the past 24 hours *Multivariate:* Currently not smoking Currently smoking	The following questions were asked: Do you currently smoke cigarettes? Do you currently smoke or use any other type of tobacco? In the last 24 hours, how many cigarettes did you smoke?
Obesity/ overweight	*Descriptive:* Underweight Normal Overweight Obese *Multivariate:* Underweight or normal Obese or overweight	Categories were based on individual BMI values: Underweight - BMI < 18 Overweight - BMI > 25<=30 Obese - BMI>30 For females the multivariate analysis for this indicator excludes from the sample those women who were pregnant at the time of the survey or had recently given birth (106 women 15-24 are excluded for this reason)

Logistic regressions were conducted (using SPSS) by sex for each indicator of risky behavior to investigate how the likelihood of the behavior varies by a number of background characteristics listed below in Table 2. This enables us to see which types of people are more likely to be exposed to each risk factor while controlling for the influences of other correlates.

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Table 2: Demographic and social characteristics

Demographic and social characteristics (covariates)	*Categories*	*Description of covariates and their categories*
Age	15-17 18-19 20-22 23-24	Age at the time of the survey
Marital status	Never married Ever married	'Never married' category includes those who have never married or have never lived together with someone (as if married) 'Ever married' includes those already in marriage or living with someone as well as those separated, divorced or widowe
Residence	Urban Rural	Place of residence at the time of survey as defined by INSTAT; bashki=town/city, komune=village
Educational level	No education/ Primary Secondary Higher	Education categories refer to the highest education level attended, whether or not that level was completed. Primary at the time of the survey in Albania was 8 years of school and secondary a further 4 years of school.
School attendance and employment	In school Not employed Employed	First category includes all those already attending any school or university full time Second category includes those who are not at school and not employed at the time of the interview. All employed (for cash or not for cash) are included in the third category
Region	Coastal Central Mountain Urban Tirana	The Region categories are based on ADHS geographical definitions (ADHS 2009)
Wealth quintile	Lowest Second Middle Fourth Highest	The wealth index is a recently developed measure that has been tested in a number of countries in relation to inequities in household income, use of health services, and health outcomes (Rutstein and Rojas 2006). The wealth index is constructed by assigning a weight or factor score to each household asset through principal components analysis. These scores are summed by household, and individuals are ranked according to the total score of the household in which they resided. The sample is then divided into population quintiles—five groups with the same number of individuals in each. At the national level, approximately 20 percent of the population is in each wealth quintile.

Comparisons across the indicators of risk factors make it possible to assess whether the same types of people are likely to engage in multiple risky behaviors. Separate models for males and females have been estimated to see whether and how influences differ between the sexes. We estimated Pearson correlations across risk factors analyzed, which also enables us to see whether the same people are more likely to engage in different risky behaviors. However, most of the correlations are fairly small (e.g., 0.244 between alcohol use and tobacco use for men and 0.149 for women); hence, these results are not presented.

4. Results

4.1 How the incidence of risk factors varies with age and sex

a) Alcohol

Men of age 15-24 are much more exposed to any alcohol use (Figure 1) than women at the same age. Prevalence of men drinking every week is 18.8% and it is around six times higher compared with women. Alcohol use increases with age, and this pattern is more pronounced for men than for women. When youth (15-24) are compared to those aged 25-49 the same pattern remains for both women and men. For men, the use of alcohol at least 1-3 days per week is twice as high for ages 25-49 as for ages 15-24



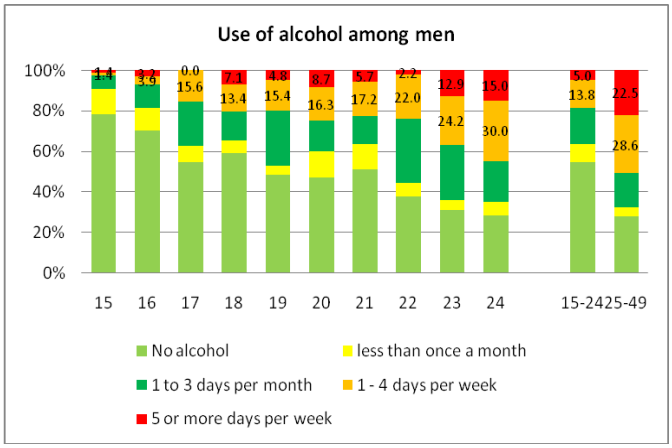


Figure 1: Use of alcohol among women and men

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b) Smoking

There are many more young men smoking than young women and the difference remains strong at adulthood (Figure 2). More than 19% of men 15-24 years old have smoked 10 or more cigarettes the day before the survey while this proportion for women of the same age is only 2.1%. Before the age 20, there are only an insignificant proportion of women smoking regularly, while 12.6% of men smoke 10 or more cigarettes per day when they are only 18 years old. The likelihood of using tobacco increases with age, but for men this trend is stronger and continues until adulthood. For men the likelihood is more than twice as large for the oldest age group (47.4% for men of ages 25-49 compared to 19.2% for ages 15-24). This pattern is not observed among women. The proportion of regular women smokers (10 or more cigarettes per day) jumps to 8.6% at the age of 23, from 2.3% among those being only one year younger. For women the use of cigarettes either less or more than 9 per day shows no substantial differences among the youth and adulthood groups (1.3% and 2.1% for age 15-24 and 1.7% and 2.8% for 25-49.

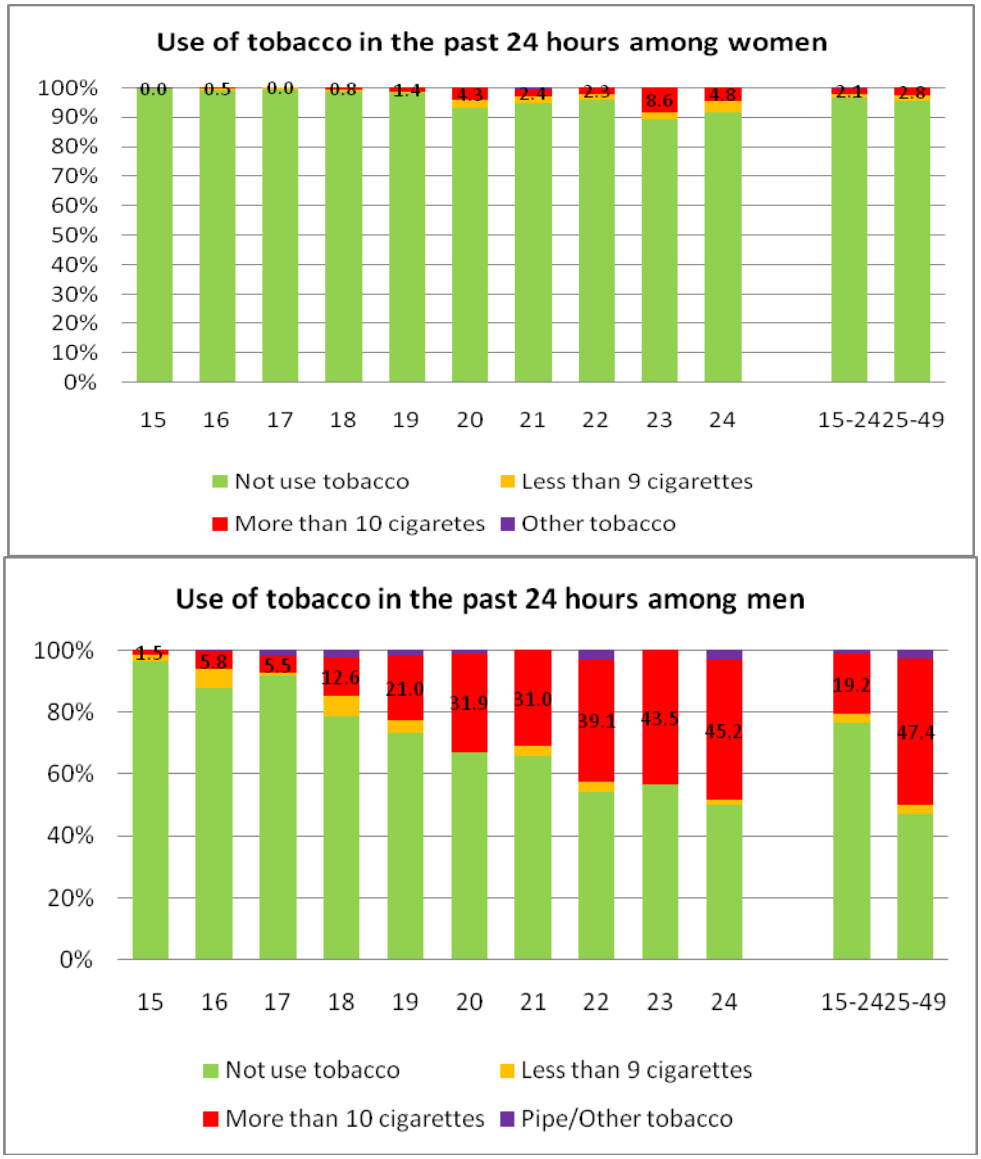


Figure 2: Use of tobacco among women and men (24 hours before the survey)

c) Overweight or obese

The likelihood of being overweight or obese (Figure 3) increases with age for both women and men. When the age groups between older and younger generations are compared, individuals aged 25-49 are more likely to be overweight or obese than individuals between ages 15-49 for both women and men. The likelihood of being overweight is greater for men than women when single age categories are compared. Furthermore, a significant proportion (up to 15%) of women of some age categories is found to be underweight. (please insert figure 3 here)

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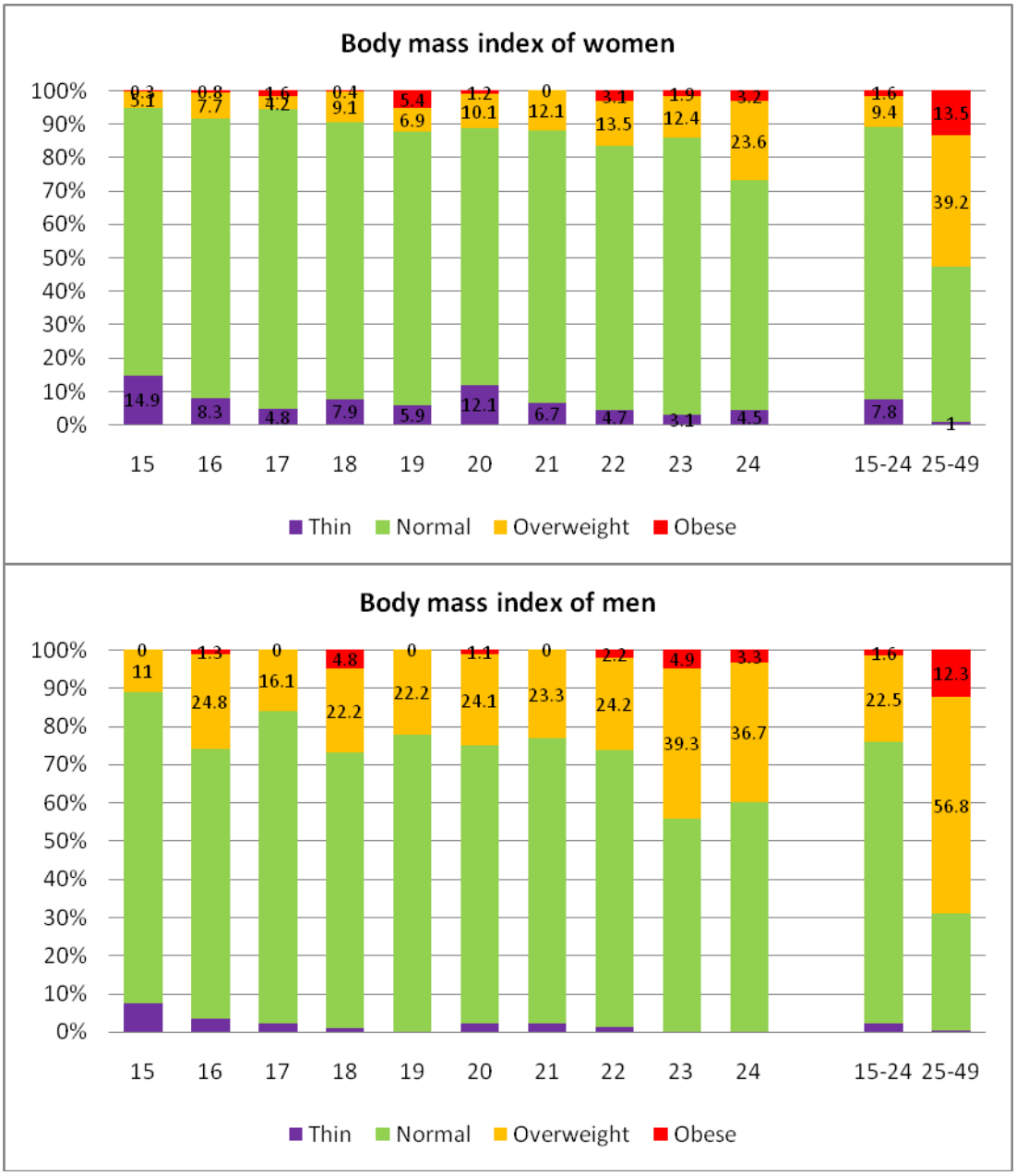


Figure 3: Categories of body mass index for women and men

5. Results from the multivariate analyses

Table 3 presents the results of our multivariate analyses to examine correlates of tobacco, alcohol, and overweight when other influences are controlled.

Table 3: Determinants of risk factors of men and women age 15-24 (odds ratios from binary logarithmic regression models)
*** p < 0.001, ** p < 0.01, * p < 0.05 (RC=reference category)

Determinant	Use of alcohol		Use of tobacco		Obese or overweight	
	Men	Women	Men	Women	Men	Women
Age						
15-17	0.142***	0.540	0.198***	0.194*	0.405*	0.368**
18-19	0.372**	0.391*	0.559	0.253*	0.537	0.480**
20-22	0.483**	1.024	0.862	0.616	0.487**	0.659
23-24 (RC)	1.000	1.000	1.000	1.000	1.000	1.000
Marital status						
Ever married	2.521*	1.302	2.573*	0.854	1.101	1.324
Never married (RC)	1.000	1.000	1.000	1.000	1.000	1.000
Education						
No educ/Primary	0.727	0.228**	0.609	0.379	1.623	1.641
Secondary	1.353	0.530	0.582*	0.524	1.659	1.610
Higher (RC)	1.000	1.000	1.000	1.000	1.000	1.000
School attendance and						

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employment						
In school	0.466*	0.444**	0.422***	0.565	0.560	0.942
Not in school or employed	0.248***	0.391**	0.705	0.959	0.802	2.105**
Employed (RC)	1.000	1.000	1.000	1.000	1.000	1.000
Residence						
Urban	1.310	0.970	1.139	2.958**	0.953	1.737*
Rural (RC)	1.000	1.000	1.000	1.000	1.000	1.000
Region						
Coastal	6.056***	2.693*	1.672	0.755	1.086	2.997**
Central	3.571**	1.079	1.386	0.387**	0.806	1.566
Mountain	3.183	0.973	1.156	0.343*	0.5487	2.398*
Urban Tirana (RC)	1.000	1.000	1.000	1.000	1.000	1.000
Wealth quintile						
Lowest	2.576*	0.275	1.386	0.668	0.911	0.880
Second	1.627	1.369	1.741	0.970	0.740	1.012
Middle	1.786	1.400	0.956	0.905	0.757	1.114
Fourth	0.883	2.552*	1.286	0.518	1.183	0.670
Highest (RC)	1.000	1.000	1.000	1.000	1.000	1.000
n	1062	2454	1062	2454	1042	2348
Cox and Snell R^2	0.152	0.035	0.150	0.061	0.050	0.084

Alcohol

For men, alcohol use increases sharply with age. Men aged 15-17 are much less likely to consume alcohol (OR=0.14) than those aged 23-24, and all subgroups under age 23 are significantly less likely to consume alcohol than those aged 23-24. The patterns are not as strong and are not monotonic for women. The only age difference that is statistically significant for women is that women aged 18-19 are significantly less likely to consume alcohol (OR=0.39) than those aged 23-24.

Men who are not employed and not in school are least likely to use alcohol; those who are employed are most likely, and students are in between. For females, too, the employed are more likely to use alcohol than students or those not employed. Alcohol use among men is lowest for the least educated and highest for those with secondary education; those with university education are in between. For females alcohol use continuously increases through all the education levels.

Alcohol use among men is higher for the ever married than the never married. A similar pattern is seen for women, but the difference is smaller and is not statistically significant. The associations of region with alcohol use differ between men and women: Men in urban Tirana are less likely to use alcohol than those in any other region. Men living in coastal regions have an OR of 6.056, which is statistically significant at the .001 level, indicating that men of all age groups living in coastal regions are six times more likely to consume alcohol than men living in urban Tirana. Women living in Coastal regions are less likely to use alcohol than those in Tirana, but the model could not find any statistical difference for those in the other regions compared with Tirana.

The poorest men (1st wealth quintile) are significantly more likely to use alcohol than the richest (5th quintile), with an OR of 2.576, indicating that the poorest men in the first quintile are two times more likely than men of the highest quintile to drink. No significant differences by wealth are seen for women. The equation has greater explanatory power for men (Cox and Snell $R^2 = 0.152$) than for women ($R^2 = 0.035$).

Smoking

As was the case for alcohol, the likelihood of smoking tobacco increases with age for both sexes; for both men and women the increase is monotonic. For both women and men the likelihood is significantly lower for the youngest groups (compared to the 23-24 group); for women it is also significantly lower for the next-to-youngest group (18-19) compared to the oldest youth group that is considered.

Smoking prevalence is highest for the most educated men, but it is low for young men still in school. Risk is lower for never-married men than ever-married. None of these variables have statistically significant effects for women.

Among women, the highest incidence of smoking is found in urban areas (OR=2.96 compared to rural areas), and it is very high especially in Tirana. Women in urban areas are almost three times as likely to smoke more than women in other areas. Since all of Tirana is urban, this means that smoking rates are particularly low in the rural parts of other regions of the country. The urban-rural and regional differences are not statistically significant for men. For neither men nor women do we see statistically significant differences by wealth in our multivariate analyses. As with alcohol use, the explanatory power of the regression is larger for men (0.15) than for women (0.06).

Weight Problems

For both men and women, the prevalence of overweight/obesity increases significantly with age. For women the relationship is monotonic. For men the largest increase occurs at ages 23-24. Women not at school and not employed are at higher risk for being overweight or obese than those employed (OR=2.11), indicating that these women are two times as likely to be overweight or obese than women who are in school or employed. Differences for this variable are smaller and not statistically significant for men.

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Women living in Tirana have a lower likelihood of being overweight or obese than those in any other region; the likelihood is significantly greater in the Coastal and Mountain regions than in Tirana (ORs=3.00 and 2.40, respectively); however, women living in urban areas in general have a higher incidence of being overweight (OR = 1.737, $p < .05$) indicating that, while not necessarily living in Tirana, women living in an urban area have almost two times higher likelihood of being overweight or obese. For men, those in the Mountain region have a lower incidence of overweight/obesity (OR=0.55) compared to Tirana. Unlike alcohol use and smoking, for overweight/obesity the explanatory power of the regression is larger for women (0.08) than for men (0.05), though it is fairly small for both sexes.

6. Discussion and Conclusions

The ages between 15 and 24 years are clearly a transitional life period for Albanians; they leave school to get a job and get married to form a new family. On average during these ages, around half of the Albanian youth population is still attending school, while by the end of this age period almost half of them are married. In both transitional paths young women differ from young men. There are many more women than men not attending school and not having a job, and there are more women married by the end of this period than men.

The transitional period can also be considered to incorporate behavioral changes and exposure to new risks. The analyses reported herein show that there is an important proportion of Albanian youth experimenting with new lifestyles and exposing themselves to health risks and conditions. In some cases (overweight and obesity for men and women) these increase with age, but by the age of 24 years, the risk is still lower than the proportion for even older adults. In other cases (alcohol use for men and women, tobacco smoking for men) this proportion increases rapidly to reach, by the end of the youth period (15-24), the level of those aged 25-49. In some other cases it may already be higher than at older ages (smoking among women).

We explored the existence of an association between risk exposures. A risk-taking lifestyle or lack of awareness for one's own health could be a common characteristic of those youth being involved in unhealthy behaviour (Ottevaere 2011; Siziya 2008). The analyses, however, did not support this hypothesis. Despite the fact that all the correlations between risky behaviors/outcomes are positive we did not find important statistical evidence for association of different risk factors in Albania.

On the contrary, the overwhelming majority of the youth population is involved in at least one of the selected risk factors analysed in this paper. Furthermore, when we tested for the association with a number of geographical, social, and economic covariates, the selected indicators followed different trends and specific profiles, with, nevertheless, a number of similarities.

Drinking of alcohol remains low among Albanian youth. This is especially the case for young women, who drink substantially less frequently than men. Alcohol use increases with age, and this increase is more pronounced for men than for women.

The socio-demographic profile of drinking also differs between men and women. Among women it is the better educated, the employed, those at the fourth wealth quintile and those living in Coastal regions who drink more frequently, suggesting evidence of "social drinking" and an increasing trend in the near future accompanying the rapid urbanisation taking place in the country. The profile among men is more complex. In their case, drinking is not more frequent among higher socioeconomic categories, and follows more or less the correlates seen for the entire population (ADHS, 2009). Those married, those living outside urban Tirana, those of the lowest wealth quintile and those not working and not at school drink more. Additionally, the alcohol use among young men in Coastal regions is particularly high. This suggests a more stabilised phase of alcohol epidemics and higher risk among lower social categories and individuals living in different regions. Alcohol use increases with age for both women and men and by the end of the youth years it is similar to the prevalence for people aged 25-49.

Tobacco use among Albanian youth increases rapidly with age, but while men's prevalence at 24 years old reaches the average level of those aged 25-49), women's prevalence in the age-group 20-24 is two to three times higher compared to that for women ages 25-49. If no action is taken, it seems likely that, in the coming decade, the "wave" of tobacco smoking among young women will carry on into older age, possibly almost tripling women's tobacco smoking prevalence in the country. Continuous urbanisation will add to this phenomenon, as the multivariate analysis shows that, as in the case for alcohol, it is women in urban areas, especially those living in urban Tirana, who smoke the most. The likelihood of increase in the future is high for men too, as the most educated men are the most likely to smoke. This social trend would jeopardize the fragile tendency towards a decrease among men 40-49 years old, demonstrated in the 2002 Reproductive Health Survey (RHS 2002) and the ADHS

The prevalence of overweight and obesity increases slowly with age, with a jump at the age of 23 for men and 24 for women. Still, the prevalence of overweight or obesity remains far lower compared to the average for ages 25-49. The prevalence of being overweight and obesity is more than twice as high among men as among women. This profile (young men more at risk of being overweight than young women) is found in some European countries neighbouring Albania (Themistoklis at al 2008), but the reverse seems be true in many other countries outside Europe especially in Eastern Mediterranean area (Papandreu at al 2008). The analyses show some different social trends among men and women that need to be taken into consideration when designing prevention policies; it appears that young women not at school and not working are most at risk to be overweight or obese. It also appears that the social pressure of having a fitter physique is indeed greater in the capital, Tirana, acting as a protective factor for women, but not for men. Similar findings are demonstrated in other developing societies (Tamim at al 2004). For young women,

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another fact that must be kept in mind is that there is a significant proportion (around one in ten) regarded as being too thin or underweight, suggesting that public advice might have to point out the need for balanced nutrition, instead of only insisting of focusing on obesity prevention.

7. Conclusions and Recommendations

There is a large majority of the youth population that is already exposed to at least one risk factor. For all three risk factors, smoking, alcohol drinking and weight problems, the prevalence of exposure among young men is much higher compared to that among young women and this can be one of the explanations for sex differences observed in older ages in chronic diseases such as coronary heart disease, stroke and lung cancer.

Specific targets (including sex, age, school or work setting) along with specific approaches and organisational issues should be set when designing intervention programs for promoting healthy behaviour among youth. These approaches should also take into consideration differences among regions and urbanicity.

Although alcohol abuse seems to be rare among Albanian youth, it may pose risks for the population health in the near future, because a very large proportion of young men are being exposed to moderate drinking and there is a rising trend among women. Any educational intervention must emphasize, among other things, alcohol addiction and drinking and driving risks.

The proportion of men smoking tobacco is already very high, but based on the data presented in this paper, we expect that the number of women smoking tobacco in the country will increase exponentially in the near future. Smoking is still considered a fashionable lifestyle in Albania, with more highly educated young men and women having a higher prevalence. Any prevention campaign should focus on youth and women. Since the educated have the highest risk, efforts should be made to reach them while they are still in school.

It seems that social pressure might have an effect in slowing down the increasing trend of being overweight and obesity among women, but not among men. Information about healthy nutrition targeting young women must be careful not to cause harm (under-nutrition and anaemia) and must target especially women living in coastal and mountainous regions. Young men in Tirana are especially at risk of being overweight and they must be considered another priority in this area.

Policy implications resulting from these data analyses are great. First, the largest differences among risk taking behaviors in youth were seen by region and between urban and rural youth. What is it about these regions that contributes to these differences? A regionally targeted national health education plan would be most appropriate to reduce risk-taking behaviors in youth.

Further research is needed in this area to cover issues not discussed here, such as contraceptive use and knowledge and practice regarding avoiding STDs, unintended pregnancy, use of illegal drugs, violence, mental health, etc. as well as to study changes over time.

References

[1] Albanian Demographic and Health Survey (2008-9) IPH, INSTAT MACRO publication. Found online at http://dhsprogram.com/pubs/pdf/FR239/FR239.pdf. Accessed on 25 June 2014.
[2] Albanian Reproductive Health Survey (2002) IPH, INSTAT CDC publication.
[3] Albert, D., Chein, J., & Steinberg, L. (2013). Peer influences on adolescent decision-making. *Current Directions in Psychological Science, 22*, 80-86.
[4] Arnett J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. Arnett, Jeffrey Jensen. *American Psychologist*, Vol 55(5), May 2000, 469-480. doi:10.1037/0003-066X.55.5.469
[5] Awusabo-Asare K, Annim SK. (2008) Wealth status and risky sexual behaviour in Ghana and Kenya. *Appl Health Econ Health Policy*. 6(1):27-39. 2008
[6] Bohr R. (ed) (2006) Health and economic development in South Eastern Europe. WHO publication. http://www.euro.who.int/__data/assets/pdf_file/0003/74748/E89184 Accessed 24 October 2012 2006
[7] Borici S. at al (2009) Blood pressure and anthropometric measurement in Albanian versus Turkish children and adolescents. Acta Cardiol 64 (6): 747-754. 2009
[8] Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 513-531.
[9] Bronfenbrenner, U., & Morris, P.A. (2006). The Bioecological Model of Human Development (pp. 793-828). In Handbook of Child Psychology, Volume 1: Theoretical Models of Human Development (Ed. Richard M. Lerner).
[10] Causes of Death in Albania (2009) INSTAT publication
[11] Chein, J., Albert, D., O'Brien, L., Uckert, K., & Steinberg, L. (2011). Peers increase adolescent risk taking by enhancing activity in the brain's reward circuitry. *Developmental Science, 14*, F1–F10.
[12] Dahl, RE. (2008). Biological, Developmental, and Neurobehavioral Factors Relevant to Adolescent Driving Risks. *American Journal of Preventive Medicine*, 35(3)S278-S284.
[13] Ellis, B.J., Schlomer, G.L., Tilley, E.H., & Butler, E.A. (2012). Impact of fathers on risky sexual behavior in daughters: A genetically and environmentally controlled sibling study. *Development and Psychopathology*, *24*, 317–332.
[14] Fajth G. at al (2000) Young People in Changing Societies. UNICEF publication. The MONEE Project Regional Monitoring Report No.7 – 2000
[15] France, A. (2000) Towards a Sociological Understanding of Youth and their Risk-taking. Journal of Youth Studies Vol. 3(3), No. 3, 317-331. 2000
[16] Furstenberg F.F. Jr. (ed). (2002) Early Adulthood in Cross-National Perspective. The Annals of the

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American Academy of Political and Social Science. Special issue. 2002
[17] GLOBOCAN (2008). International Agency for Research on Cancer. http://globocan.iarc.fr. Accessed 5 November 2012
[18] Health and Health Behaviour among Young People . (2000) WHO publication 2000
[19] Kanaan MN, Afifi R.A. (2010) Gender differences in determinants of weight-control behaviours among adolescents in Beirut. *Public Health Nutr.* 2010 Jan;13(1):71-81
[20] Le Breton D. (2002) Conduites à risques. Des jeux de mort ou jeu de vivre. Presses Universitaires de France
[21] Ottevaere C. at al (2011) HELENA Study Group. Clustering patterns of physical activity, sedentary and dietary behavior among European adolescents: The HELENA study. *BMC Public Health.* doi 10.1186/1471-2458-11-32811:328
[22] Papandreu C, Abu Mourad T, Jildeh C, Abdeen Z, Philalithis A et al. (2008) Obesity in Mediterranean region (1997-2007): a systematic review. Obes Rev 9: 389-399.
[23] Ross H., et al. (2008) Results from the Albanian Adult Tobacco Survey. Cent Eur J Public Health 16(4): 182-188.
[24] Settersten, R. A. Jr. (2003a). Age structuring and the rhythm of the life course. In J. Mortimer & M. Shanahan (Eds.), Handbook of the life course. (pp. 81-98). New York: Kluwer Academic/Plenum Publishers (pp. 81-98).
[25] Singh SK, Schensul JJ, Gupta K, Maharana B, Kremelberg D, Berg M. (2010) Determinants of alcohol use, risky sexual behavior and sexual health problems among men in low income communities of Mumbai, India.] *AIDS Behav.* 14 Suppl 1: :S48-60.
[26] Siziya S., et al. (2008) Harmful lifestyles' clustering among sexually active in-school adolescents in Zambia. *BMC Pediatr.* doi:10.1186/1471-2431-8-611;8:6
[27] Steinberg, L. (2008). A social neuroscience perspective on adolescent risk-taking. *Developmental Review, 28,* 78-106.
[28] Sujoldzic A. at al. (2007) A cross-cultural study of adolescents – BMI, Body image and psychological well-being. Coll Antropol 31 (1): 123-30
[29] Shapo L. et al. (2003) Body weight patterns in a country in transition: a population based survey in Tirana, Albania. Public Health Nutr 6 (5): 471-477
[30] Shea Oscar Rutstein, Guillermo Rojas. (2006) Guide to DHS statistics. *Demographic Health Surveys Methodology.* ORC MACRO
[31] Tamim H, Dumit N, Terro A, Al-Hourany R, Sinno D, Seif F, Steitieh S, Musharrafieh U. (2004) Weight control measures among university students in a developing country: a cultural association or a risk behavior. *J Am Coll Nutr.*;23(5):391-6.
[32] Terry-Humen, E., Manlove, J., & Cottingham, S. (June, 2006). Trends and recent estimates: Sexual activity among U.S. teens. *Child Trends, Publication* #2006-08.
[33] Timmermans, M., van Lier, P.A.C., & Koot, H.M. (2008). Which forms of child/adolescent externalizing behaviors account for late adolescent risky sexual behavior and substance use? *The Journal of Child Psychology and Psychiatry*, 49, 386-394.
[34] Themistoklis T, Efthymos K, Konstantinos T at al. (2008) Epidemiological Survey for the Prevalence of Overweight and Abdominal Obesity in Greek adolescents. *Obesity* Vol. 16. (Issue 7): 1718-1722
[35] Unicef. Albania Facts on Children. (2004). Found online at http://www.unicef.org/albania/children_649.html. Retrieved 25 June, 2014.
[36] Vakefliu Y. et al. (2002) Tobacco smoking habits, beliefs and attitudes among medical students in Tirana, Albania. *Prev Med* 34(3): 370-373

The authors declare that they have no conflict of interest

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