



## THE EFFECT OF THE PHYSICAL ACTIVITY AND OTHER FACTORS ON MORTALITY IN ALBANIA FROM 1990 TO 2012

SHEHU ZYLFI<sup>1</sup>, FERUNAJ PERPARIM<sup>2</sup>, GALO ALPIN<sup>3</sup>, JANO DANIEL<sup>4</sup>

### Abstract

**Objectives.** During the last 10 years the private sector in Albania, especially in Capital of Tirana, founded proper conditions to invest a big money in hospitals and pharmacy building. The problematic situation regarding the increase of non effective diseases offered a good chance for a such business. Although these very big investments for healthcare for albanian citizens, reports from Ministry of Health periodically informed albanian population about the increase of different chronic diseases, such as Cardiovascular, type 2 diabetes, different cancers and depression. The aim of this study is to analyze the impact of physical activity, nutrition, alcohol, tobacco and environment on morbidity and mortality of albanian population.

**Methods.** We used questionnaires for 2550 male + 1678 female residents of urban cities, and 2219 male + 1840 female, inhabitants of rural areas to compare the impact of physical activity and environment on their mortality. Questions consisted to mortality age, the reason of death, the living place, the status of body weight (normal, overweight, obese), the occupation, daily activity (little, moderate, vigorous) and nutrition and were filled by their relatives.

**Results.** Our data showed that physical inactivity, used of tobacco, alcohol, malnutrition and polluted environment are risk factors for morbidity and mortality among old people.

Average lifespan was 69.07 years for women in rural areas while in urban areas, 61.63 years. Average lifespan was 68.09 years for men in rural areas while in urban areas 61.74 years. The percentage of the rural areas women that have died naturally was 28.95% while for women of urban areas 17.95%. The percentage of rural areas men that have died naturally was 20.55% while for men lived in urban areas, 14.96%. The others have died from heart disease, cancer, diabetes, suicide, etc.

**Conclusions.** Considering the data of our survey, except other factors, the main cause of deaths was two fold 1) the influence of environment and 2) the influence of physical activity (or inactivity). Thus, old people of urban areas should be encouraged to change their behaviour and to imitate the life style of their peers living in rural areas, doing more physical activity and choosing natural nutrition. On the other hand, public institutions should take necessary projects to make the living of old people in urban areas more healthy.

**Key words:** albanian population, mortality, physical activity, nutrition.

### Introduction

During the last 22 years, the time period which corresponds with the change of political system from dictatorship to democracy, albanian population distribution has moved towards urban cities, with a tendency the capital, Tirana. This change has been associated with the change of lifestyle, as well. It is well known that the population living in urban cities live a more sedentary lifestyle than those living in rural area, making them prone to higher risk of premature morbidity and mortality. On the other hand, people living in rural areas are obligated to do more physical activity than those living in urban cities, just for the simple reason to provide daily nutrition. It is well known the linear dose-response

relationship between the volume of physical activity and all-cause mortality rates (I-M.Lee, Skerrett, 2001; Blair, 1989). Aging is a very complex process, caused mostly from genetic, damage or gradual imbalance deterioration (Spirduso, Francis, & MacRae, 2005).

In contrary, there is a sound of information about the influence of physical fitness in minimizing the risk of cardiovascular disease, type 2 diabetes, osteoporosis, stroke, breast cancer, colon cancer, depression, as well as disability itself (Carlson, 1999; Hubert, 1993). Data from INSTAT show the average age of death for both men and women in Albania, but they do not give the reason. Although we are conscious that the reason of morbidity and mortality of albanian population is a complex issue,

<sup>1</sup>Wrestling Referee, Albanian Wrestling Federation, ALBANIA

<sup>2</sup>Sports University of Tirana, ALBANIA

<sup>3</sup>University of Tirana, ALBANIA

<sup>4</sup>High School "Nefail Rozani", Korça, ALBANIA

Email address: kampion\_absolut@yahoo.com

Received 7.03.2014 / Accepted 4.05.2014

we are trying for the first time to understand in this study the influence of environment and physical activity in this matter. Culture of aging is a factor, but not the target of our study.

**Methods**

We used questionnaire from the relatives of died people (2550 male + 1678 female residents of urban cities, and 2219 male + 1840 female, inhabitants of rural areas). The selection of Albania's cities is done randomly, including Kukësi, Tirana, Durrësi and Korça. We used

questionnaireis in both urban and rural areas. Questions consisted to mortality age, the reason of death, the living place, the status of bodyweight (normal, overweight, obese), the occupation, daily activity (little, moderate, vigourous). Nutrition, alcohol and tabacco.

**Results**

The data of our investigation showed reduced age of death in persons living in urban areas and higher rates of death of sedentary people

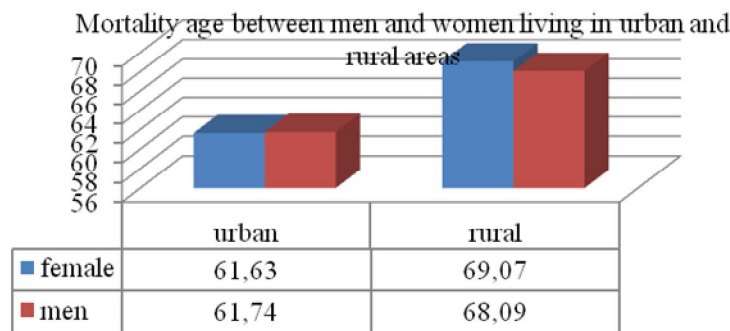


Figure 1. The data show that men and women live longer in rural areas, respectively (69.07 and 68.09 years) than those living in urban cities ( 61.74 and 61.63 years).

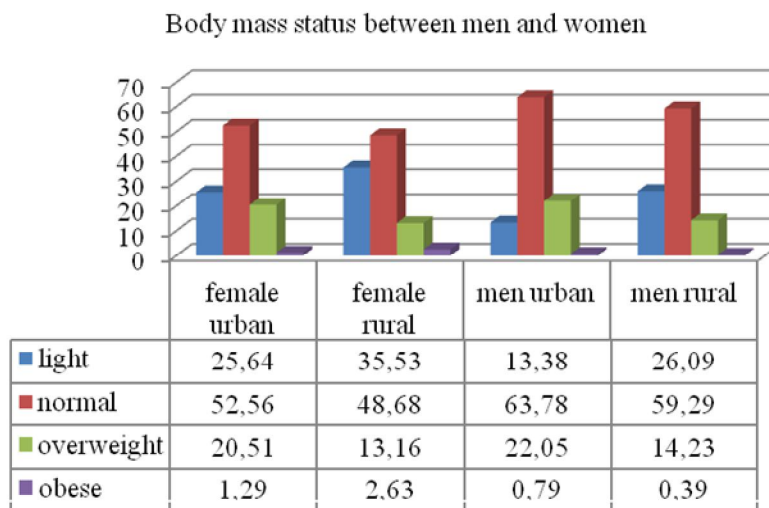


Figure 2. In this graph, is evident that percentage of overweight men and women is higher in urban areas than rural ones, while normal weight body

mass is higher in men for both urban and rural areas.

### Physical activity levels between men and women in urban and rural areas

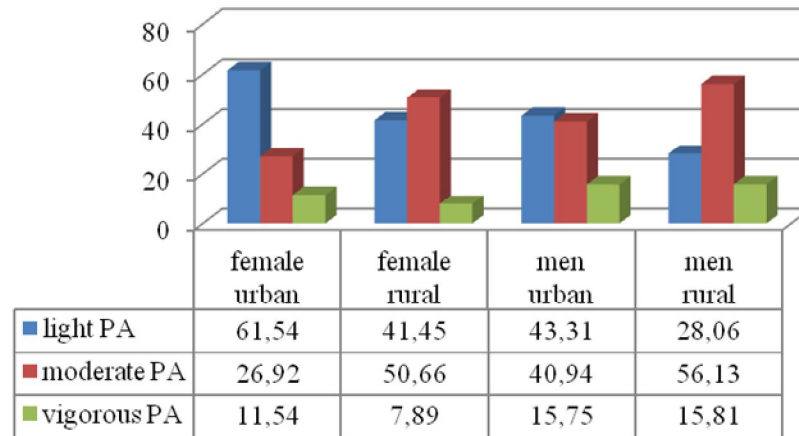


Figure 3. It is shown in this graph. that urban females and males have lower % of moderate PA

levels, whereas in vigorous PA men for both urban and rural areas have higher percentage than women.

### The cause of death between females and males of urban and rural areas

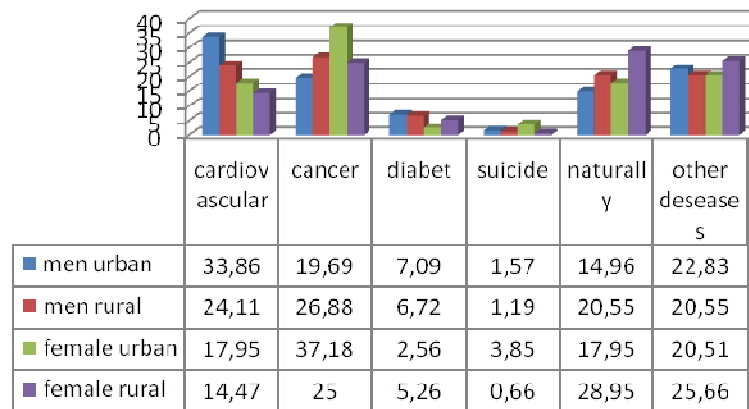


Figure 4. It is shown in above graph that males and females of urban areas have higher percentage of death from cardiovascular diseases. The number of deaths caused from cancer are higher in urban females followed from rural males.

### Nutrition, alcohol and tobacco use from females and males from urban and rural areas

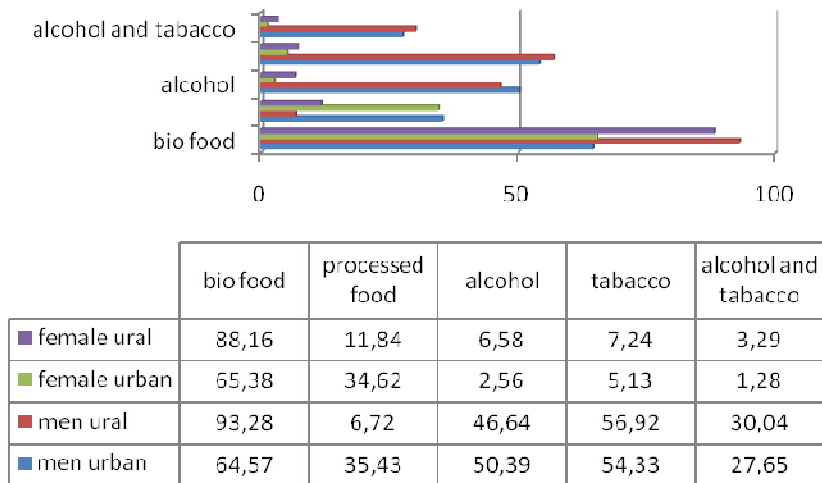


Figure 5. In above graph the higher values of bio food belongs to males of rural areas, whereas in higher values of processed food use are males of urban areas. Higher percentage of alcohol use belongs to males of urban areas, whereas for tobacco use males of rural areas.

#### Discussions

After the fall of communist system in Albania after 1990, some changes in lifestyle and food use occurred in our population. All these changes influenced directly in health status and longevity of albanian population. During this time the use of processed food was increased year after year. In addition the use of alcohol and tobacco was increased, too. On the other hand the technologic revolution during these years, especially the last 10 years, made the number sedentary people and low physical activity to increase year after year. In fact, to our knowledge, there is no study in Albania to investigate the influence of physical activity and environment to morbidity and mortality of our population. Thus, we consider the strength of our study analysing such a very important matter for public health. However, the weakness of the study is limited urban and rural areas population, only in Tirana, Durrës, Kukës and Korça regions. Furthermore, probably this limited investigated population is the reason of decreased longevity of population compared to data from INSTAT, which showed the longevity 72.1 for men and 78.6 for women. In addition, the reason of our data showing the mortality age for men and woman, respectively, 65 and 65.4, can be explained of biggest percentage of our subjects of Tirana, which is known for the

worst pollution situations and sedentary lifestyle compared to other areas of Albania. The need of coping everyday life in rural areas is related to increased physical activity. Thus, under the psychological point of view, we consider that it is difficult to confirm higher motivation in physical activity involvement of rural population compared to urban counterparts, because the last ones have more access to find ready food in market.

The factors influencing in death of our population are complex. As shown in graph no. 4, 33.86% of males of urban areas died from cardiovascular diseases, while for men or rural areas the percentage was 24.11%. Compared with females of rural and urban areas, in men the number is higher. The females of urban areas was 37.18% from cancer (dominant breast cancer). Men of rural areas have higher rates of death from cancer compared to rural females. Regarding the diabetes, we have lower values, respectively 7.09% to urban areas men and 2.56% to urban areas females. Considering all factors, the lowest percentage of death belongs to suicide (3.85% urban females). The interesting finding in respect of natural causes of deaths was to rural areas females, which was 28.95%, while for men of urban areas this value was 14.96%. Other diseases was the cause for death for 25.66% of rural areas females, while for urban areas females this number was lower.

In graph. No 5 regarding the bio food use, the highest values belong to rural areas, for both men and females respectively, 93.28% and 88.16%. the use of processed food was within men and females of urban cities, respectively 35.43% and 34.62%.

#### Conclusions



Although the complex issue of many different factors of death age in both populations, we founded that longevity of people living in rural areas was higher than those living in urban areas. This is partly explained by environment where they live, physical activity and bio nutrition status. Although during the last 10 years the number of private hospitals and pharmacies were increased in number in Tirana, capital of Albania, this has not helped to increase longevity of its habitants. Other studies have reported that in an urban society a wide variety of physical, social, and economic factors exhibit interrelationships while also affecting the health of residents (Breeze, 1999; Takano 2001). Data from our study show that the predominant factor to increase longevity is not the improvement of technology and health care of citizens of urban cities (increase in number for hospitals and pharmacies) but the environment and physical activity level and education level of individual to understand the benefits of active lifestyle. Thus, people living in rural areas, showed the level of physical activity higher than those living in urban cities, a factor that can be related with body mass status. In addition, it is well known that the food consumed is more contaminated in urban residents than rural ones. The growing population in urban cities in Albania, especially in Capital of Tirana, was associated with increased cars and buildings and food requirements. This situation has caused environmental hazards such as pollution and food contaminants, which increase the risk of cancer, heart disease, asthma, and many other illnesses. In addition, this urbanisation of the cities brings about a sedentary lifestyle, the key risk of premature morbidity and mortality (Blair, 1989). A sound information exists today about the factors of aging, such as biological, including the damage of DNA, associated with diet, lifestyle, pollution, radiation and other outside influences (Panno, 2005). It is well known that prevention of disease is more helpful than curing to improve the longevity and data from our study can be used from different state organisations and institutions responsible for public health to sensitize population for high values of physical activity and environment for the prevention of chronic diseases, and as consequence, for their higher longevity.

## References

- Lee, I-M., Skerrett J., 2001, Physical activity and all-cause mortality: what is the dose-response relation? *Med Sci Sports Exerc.*;33:S459–S471.
- Blair, SN., Kohl, HW., Paffenbarger, RS., et al., 1989, Physical fitness and allcause mortality: a prospective study of healthy men and women. *JAMA.*;262:2395–2401.
- Carlson, J., Ostir, G.,
- Black, S., Markides, K., Rudkin, L., Goodwin, J., 1999, Disability in older adults 2: physical activity as prevention. *Behav Med.*;24:157–168.
- Miller, M., Rejeski, W., Reboussin, B., Ten Have, T., Ettinger, W., 2000, Physical activity, functional limitations, and disability in older adults. *J Am Geriatr Soc.*;48:1264–1272.
- Hubert, H., Block, D., Fries, J., 1993, Risk factors for physical disability in an aging cohort: the NHANES I Epidemiologic Followup Study. *J Rheumatol.*;20:480–488.
- Breeze, E., Sloggett, A., Fletcher, A., 1999, Socioeconomic and demographic predictors of mortality and institutional residence among middle aged and older people: results from the Longitudinal Study. *J Epidemiol Community Health*;53:765–74.
- Takano, T., Nakamura, K., 2001, An analysis of health levels and various indicators of urban environments for Healthy Cities projects. *J Epidemiol Community Health*;55:263–70.
- Blair, SN., Kohl, H.W., Paffenbarger, RS., et al., 1989, Physical fitness and all cause mortality. A prospective study of healthy men and women. *JAMA*;262:2395–401.
- Spiriduso, W. W., Francis, K. L., MacRae, P. G., 2005, *Physical Dimensions of Aging*. Windsor: Human Kinetics.
- Panno, J. , 2005, *Aging: Theories and Potential Therapies*. New York: Library of Congress Cataloging -in-Publication Data.