

HEALTH BEHAVIORS IN RELATION TO DEMOGRAPHIC VARIABLES IN ADULTS

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Abstract

Health behaviors shape health and well-being in individuals and populations. Researchers have recently shown great interests in studying health behaviors and their impact on the physical and mental health of individuals. Therefore, our aim was to analyze health behaviors (physical activity, diet, smoking and alcohol consumption) in relation to demographic variables (gender, age, economic status) in adults. Data collection is conducted through quantitative method and the respective instrument, with a sample of 961 Albanians from several cities in North Macedonia, aged 25-65. The findings showed that physical activity reached a mean score of ($M=5,51$) in the researched sample, while no statistically significant differences were found in any of the demographic variables. The carefulness regarding the food has reached a value above the mean ($M=16,69$) and differences are found in relation to gender with an obtained Z value for $-4,478$ $p<0,01$, in relation to age $p<0,01$ and economic status $p<0,01$. More than half of the sample ($N=513$) smokes and in relation to the demographic variables, smoking was found with significant statistical differences only in terms of gender, the obtained Z value for $-4,165$ $p<0,01$.

Of the total number of subjects ($N=961$), only 23% declared that have consumed alcohol, while 77%, namely $N=753$, had not consumed alcohol in the last 12 months, while statistically significant differences were found in the gender variable with an obtained Z value for $-5,809$ ($p<0.01$) and age ($p<0.01$) regarding this variable.

Keywords: physical activity, healthy diet, smoking, alcohol, demographic variables, health behaviors

Introduction

The last millennium has seen an increase in interest in topics mainly related to the health and well-being of society, the way people live and the behavioral habits they practice. In modern societies, researchers emphasize that a significant increase in lifestyle-related diseases has been observed.

Researchers Kasl and Cobb (1966) define health behaviors as intentional actions that the individual undertakes to detect, prevent, improve and ensure well-being.

As early as the 1980s the World Health Organization (WHO) had recognized the emergence of a concept of lifestyle and offered the following definition: Lifestyles are patterns of (behavioral) choices from the alternatives that are available to people according to their socio-economic circumstances and the ease with which they are able to choose certain ones over others. (WHO 1986: 118). This early definition of 'lifestyle' recognizes the contextual element of choice and how choice may be limited by factors out of the control of the individual but does not specify which behaviors are considered to be key in terms of maintaining health and preventing disease. Indeed the WHO states: 'it is one of the WHO's responsibilities to ensure that the lifestyle concept is not used as a blanket explanation in which the victim is always blamed' (WHO 1986: 118).

The behaviors that are reported negatively influence human physical and mental wellbeing (Farhud, 2015). Insufficient physical activity, smoking (Blaxter 1990; Doyle 2001), unhealthy dietary practices, and excessive alcohol consumption (National Assembly for Wales 2000, ONS 2007) are mainly the main contributors to significant acute and chronic diseases (Kirag, Ocaktan, 2013), as well as mental health problems such as anxiety and depression (Jao, Robinson, Kelly, Ciecierski & Histman, 2019,).

A healthy lifestyle significantly predicts productivity, life expectancy, and future health status (Smith, Disler & Waston, 2020). To enhance the healthy lifestyle of populations, the World Health Organization (WHO) declared that health promotion is the basic strategy in healthcare (Heydari, Khorashadiazadeh, 2014).

In this study, our primary focus will be on examining health behaviors in relation to demographic factors, specifically gender and economic status. Our aim is twofold: firstly, to explore the distribution of these behaviors, and secondly, to analyze the disparities in their distribution. The ultimate objective is to provide a comprehensive overview of the subjects' lifestyle, who constitute the sample of our study.

Methodology

The goal of the study

To analyze some healthy behaviors in some of the demographic variables

Research question:

- Are there statistically significant differences in the demographic variables regarding healthy behaviors?

Study variables: DV: Healthy behaviors (physical activity, diet, smoking, alcohol consumption)

IV: Gender and economic status

Study hypothesis:

There are statistically significant differences in demographic variables (gender, age and economic status) regarding health behaviors (physical activity, diet, smoking and alcohol consumption).

Sub-hypothesis:

SH1. Female respondents show a higher level of favorable health behaviors compared to male respondents.

SH2. Respondents of higher economic status show more favorable health behaviors than respondents of lower economic status.

Study sample:

At first, the questionnaire was completed by 1026 subjects, but after cleaning the data, the final number that was continued for analysis was 961. Female 543 male 418. Regarding economic status, 91 subjects were of low economic status, 514 with moderate economic status, 219 with good economic status and 137 with very good economic status.

Table 1. Descriptive analysis of demographic variables

Gender	N
Female	543
Male	418
Economic status	

Low	91
Moderate	514
Good	219
Very good	137

Research instrument:

In this study, the HBQ instrument (Health Behavior Questionnaire) by the authors Jessor, Donovan, Costa 1992 was used, modified according to the objective of our study.

Results

As can be seen in table 2, the physical activity was distributed among the subjects with an average of 5.51 with a minimum value of 0 and a maximum value of 12, which means that the subjects of this research have shown an average value of physical activity.

Regarding diet, the average value achieved is 16.96 from the minimum value of 0 and the maximum value of 29. Based on the average value obtained, we can say that our subjects have a marked care towards the way of healthy diet.

Table 2. Descriptive analysis of study variables

	N	M	SD	Min.	Max.
Physical activity	961	5,51	2,777	0	12
Diet	961	16,96	4,899	0	29

Table 3 shows the descriptive data concerning the responses provided by the participants regarding smoking and alcohol consumption. Regarding the smoking variable, which has been categorized into smokers and non-smokers, out of the 961 participants, 513 indicated being smokers, while 448 stated that they do not smoke. In terms of alcohol consumption, out of the total 961 participants, 753 reported that have never drink alcohol in the past 12 months, while the remaining participants had consumed alcohol during the past 12 months and were further categorized into various options, whereas we can emphasize that only six participants stated that consume alcohol on a daily basis.

Table 3. Descriptive analysis of study variables

Drinking alcohol	Every day	3-5 times during the week	1-2 times during the week	3-5 times during the month	1 time per month	Never
	6	19	35	43	105	753
Smoking	Yes	No				
	513	448				

To see the differences between the gender regarding health behavior, we used the non-parametric test Mann-Whitney U. table 5. The results showed that there are statistically significant differences between gender and diet and Z-value of -4.478 and significance level p value of 0,00 were obtained; between gender and smoking, Z-value of -4.615 of significance level of p for 0,00were obtained; between gender and drinking alcohol, a Z-value of -4.615 with a significance level of p for 0,00was obtained, while no significant statistical differences were found in terms of gender and physical activity, where a Z-value of -1.114 was obtained, while the level of significance exceeded the 0,05 threshold and resulted in a p value of ,265. According to the obtained results, women are more careful in their food, smoke less and drink less alcohol than men.

Table 4. Statistical differences of health behaviors in terms of gender

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Diet	Female	543	513,30	278722,00
	Male	418	432,75	178724,00
	Total	961		
Smoking	Female	543	444,97	241617,00
	Male	418	522,59	215829,00
	Total	961		
Alcohol	Female	543	445,50	241906,50
	Male	418	521,89	215539,50
	Total	961		
Physical_activity	Female	543	469,88	255143,50
	Male	418	489,84	202302,50
	Total	961		

Table 5. Mann-Whitney U test results

Test Statistics ^a				
	Diet	Smoking	Alcohol	Physical Activity
Mann-Whitney U	93233,000	93921,000	94210,500	107447,500
Wilcoxon W	178724,000	241617,000	241906,500	255143,500
Z	-4,478	-4,615	-5,809	-1,114
Asymp. Sig. (2-tailed)	,000	,000	,000	,265

a. Grouping Variable: Gender

The findings of the Kruskal-Wallis H test, as illustrated in Table 7, reveal statistically significant differences regarding the economic status and health behaviors, specifically within the diet variable with a statistical value of $p,009$ and a degree of freedom $df 3$. Specifically, respondents with a high economic status were found to be more careful regarding food compared to all other groups. On the other hand, respondents with a low economic status were less careful regarding food compared to all groups. While between the economic status and other health behaviors (physical activities, drinking and smoking), the level of significance exceeded the 0,05 threshold, therefore no significant statistical differences were found.

Table 6. Statistical differences of health behaviors in terms of economic status

Ranks			
	Economic_status	N	Mean Rank
Diet	Low	91	391,16
	Moderate	514	482,93
	Good	219	473,32
	Very good	137	513,92
	Total	961	
Smoking	Low	91	514,58
	Moderate	514	474,38
	Good	219	466,82
	Very good	137	473,99
	Total	961	
Alcohol	Low	91	481,60
	Moderate	514	472,10
	Good	219	464,06
	Very good	137	508,69
	Total	961	

Physical Activity	Low	91	456,57
	Moderate	514	484,28
	Good	219	472,65
	Very good	137	466,47
	Total	961	

Table 7. Kruskal-Wallis Test Results

Test Statistics ^{a,b}				
	Diet	Smoking	Alcohol	Physical Activity
Kruskal-Wallis H	11,663	2,349	4,662	1,126
Df	3	3	3	3
Asymp. Sig.	,009	,503	,198	,771

a. Kruskal Wallis Test

b. Grouping Variable: Economic_status

Conclusions and discussions

Much of the existing literature examined the influence of socio-demographic status, health behavior, of the middle-aged and elderly. Health behaviors include variables of smoking, alcohol consumption, diet and physical activity. All of these were measured as dichotomous variables, considering whether there would be differences in terms of demographic factors such as whether respondents smoked, drink alcohol, ate healthy, or did enough physical activity. In our study women tend to report a healthier diet, drink less cigarettes and alcohol than males. These results were consistent with previous studies (Marques et al., 2015, Drake et al., 2013; Wei et al 2012; Suraj, Singh, 2011;Amcoff & Edberg, 2010). Such findings could be explained by females choose to eat healthier foods than men because women are more anxious about their health and weight. They're usually more in tune with their bodies due to experiencing menstrual cycles, pregnancy (Carpenter, Frank & Vaugh, 2018). Regarding smoking women smoke fewer cigarettes per day and have lower nicotine dependence. The lower consumption may be related to gender differences in motivations for smoking. Specifically, women who smoke daily tend to do so in response to non-nicotine stimuli (such as cue exposure, stress reduction, or weight control) whereas men are more likely to smoke to maintain nicotine levels. These results were consistent with previous studies (Perkins, 2001; Shiffman & Paton, 1999; Vogel, Hersgaard& Dermody, 2014). A large research literature such as our study shows that women consistently consume less alcohol than men but these gender differences vary culturally, demographically, and historically (Keyes, Hasin, 2011;Nolen, 2004), studies have found that males had greater dopamine release than females. This increase was found in the ventral striatum, an area of the brain strongly associated with pleasure, reinforcement and addiction.

As for the second sub-hypothesis that the respondents with higher economic status show more favorable health behaviors than respondents with lower economic status, the results showed that the economic status was shown as a statistically significant variable in relation to the healthy diet and not to the other variables.

There is a well-established link between higher socioeconomic status and a healthier diet. Socio-economic status refers to a person's social and economic position within society, often determined by factors such as income, education and occupation. Several factors contribute to the association between higher economic status and a healthy diet. Individuals of higher socioeconomic status generally have better access to a wide variety of fresh, nutrient-dense foods (Caraher, Dixon, Lang&Carr,1998; Henderson, Gregory &Swam, 2002). They can afford to buy fresh fruits, vegetables, which are essential components of a healthy diet (John & Ziebland 2004). Additionally, individuals of higher socioeconomic status often prioritize their health and well-being. They may become more aware of the long-term health consequences of poor dietary habits, leading them to adopt healthier eating patterns (Anderson et al. 2001).

Although the results of our study did not show a statistically significant difference between people of different economic status, other studies have found that the relationship between socio-economic factors and drinking is not simple. There is some evidence that people from the most deprived walks of life are more likely to drink alcohol, develop dysfunctional alcohol dependence and die from conditions with a predominantly alcohol-related etiology (HM Government 2007). However, regular consumption at levels above the recommended limits is more likely in people from higher socio-economic groups, particularly women (Department of Health, Social Services and Public Safety 2001; Scottish Executive 2005). Further research is needed to gain a deeper understanding of the relationship between economic status and health behaviors, as well as to explore the potential influence of additional factors in order to develop comprehensive interventions and policies aimed at promoting healthy behaviors across different economic strata.

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