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Original scientific paper

Lifestyles and Risk Factors for Developing NCDS Among Students of Health Sciences in Republic of Srpska

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ABSTRACT: Lifestyles develop throughout the life, but adolescence and early youth are important stages in acquiring healthy lifestyles habits. This is also vulnerable period for substance misuse, worsened diet habits and sedentary lifestyles linked to academic activities and responsible for developing non communicable diseases (NCD). Goal of the article is to analyse lifestyles habits and risk factors for developing NCD among students of health sciences. Study is conducted at the University Apeiron, Faculty of Health Sciences among students from first to fourth years of study. Specially designed questionnaire was prepared and distributed on line, anonymously and voluntary fulfilled by students. Every fifth student is smokers, 5,1% consume alcohol daily, more males (12,1%) than females (2,9%) ($p<0,05$). Majority of males (42,2%) consumed alcohol drinks in one occasion during previous month, statistically more than females (21.2%) ($p<0,05$). More than two third of students eat fruits and vegetables daily and one third have regular meals. Moderate physical active are 42,3% of students, and physical inactive are more females than males ($p<0,05$). Risk factors for NCD have to be prevented with supportive policies in school environment and community. Students of health sciences should be a positive model of changing risk habits for NCD and saving future quality of life.

Keywords: lifestyles, risk factors, NCD, students, prevention of diseases.

INTRODUCTION

Lifestyle is a set of the multidimensional aspects of personal behaviour in daily activities such as consumption of different matters which are associated with life choice and impact of community (EULM, 2022). Daily behaviour of diet/nutrition, physical activity, substance use (consuming cigarettes, alcohol, drugs etc), social support and management of stress have an effect on life habits and perception of health. Healthy lifestyle habits have been continual shown to influence personal health and perception of three dimensions of health: mental, social and physical (Nyberg, 2022). All dimensions of health are in dynamic balance of daily habits and determination of social environmental. Socio-economic conditions, living standards, living with a family members and social interactions, occupation and education influence on daily life styles and have an impact on health (Soininen M, 2022). Youth like to spend leisure time with friends in different physical activities and this kind of social support is very important to life styles of youth and healthy choice.

Young adults have the lowest risk of diseases but they are exposed to substance use with high risk of developing dependence and other problems during adult life. Young people are disproportionately affected than people in adult age but the risks accumulated and increased opportunity to non-communicable diseases (NCD) during life (WHO, 2023). Substance use are associated with mental health disorders and in young adults those risks are mainly undetected (WHO, 2023).

Each sixth adolescent in Euro World Health Organization (WHO) region is overweight and each fifth of them has no regular physical activity which is connected with NCD in older ages (WHO, 2021).

Physical inactivity and sedentary nature of many forms of work places and education increase urbanisation associated with risk of obesity and overweight in young adults (WHO, 2004).

Health of students in school environment is under social contribution of friends and teachers, educational programme and academic achievement which maintenance psychosocially, mentally and physically growth (Al-Shehri, 2002). Schools have capacity to learn student's good healthy choice and healthy lifestyles. According to "Health for All" Policy of World Health Organization and Education for All Policy of United Nations each community has commitment for supportive school environment which promote and improve health. Schools can serve a variety of ways to promote health, prevent diseases and injuries and reduce risks for diseases (WB, 1993). Today, the concept of school health goes beyond providing health education for students and creating environment for physical education and recreation including recommendation for healthy lifestyles according to WHO guidelines.

Students at the Faculty of Health Sciences have specific role in promoting healthy lifestyles because they are models of health behaviours which improve health but often social, school environment and community factors determine risk behaviours for developing NCD and have a negative effect on health (Short, 2015).

Social factors affect health behaviours of students through different parts of daily activities influenced by patterns of daily behaviour at home, among peer groups, in local community, media and advertising and exposed to smoking, alcohol consumption, sedentary lifestyles and unhealthy nutrition (Steptoe, 2010).

University is a period of responsibility in terms of lifestyle practices among young adults where students face stresses of achieving success in their academic goals living in conditions without awareness of risk adjustment to lifestyles and environment (Nasir, 2019). Healthy choices are individual responsibility in community in which every person has a role for promoting healthy lifestyle.

Goal of the article is to analyse lifestyles habits and risk factors for developing NCD among students of health sciences in Republic of Srpska, University Apeiron. Specific goal is to determine differences between socio-demographic and socio-economic characteristics among students with NCD risks.

MATERIAL AND METHOD

The research was conducted at the University of Apeiron, Faculty of Health Sciences in Banja Luka, during autumn 2022. All students have possibility to participate in the survey through information given by e-mail and university media about subject of survey and instructions to link with on line introduction of survey and anonymously fulfilling of questionnaire.

Sampling frame was consisted of students from different studies of health sciences: nurses, physiotherapists, sanitary engineering and laboratory. Only students who read instructions and voluntary fulfil questionnaire were sampled. Sample consisted of students from all fourth years of study.

For the purposes of this research a specially designed questionnaire was used to evaluate lifestyle-related attitudes and practices. General part of questionnaire consisted of basic socio- demographic characteristics of participants (gender, age, place of resident and educational background) and socio-economic conditions through determining their living condition status as a good, average and low.

Educational background is divided in general, medical and technical secondary school education but for reason for analysing students' behaviours, education is selected in health sciences and other sciences. Social support at home was measured by living with families and friends or living alone. Survey includes questions about work experience in health institution because this aspect shows broader view of participating students in community life and could influence students' behaviours.

Lifestyles habits are measured according to Eurostat 2018 guidelines and recommendations in Health interview survey (Eurostat, 2018). Daily smoking is consuming all types of cigarettes including

e-cigarettes and daily alcohol consumption is drinking a wine/beer more than 1 dcl, spirits more than 0,05 dcl and coloured flavoured drinks more than 2 dcl. For moderate physical activity we calculate fast walking, swimming or bicycle riding which takes 30-60 minutes. According to WHO recommendations regular meals are meals with 3 main dishes and 2 snacks, and daily consumption of fruits and vegetables is consuming one portion of these foods per day.

Risk factors are determined and measured according to the WHO STEP wise approach to noncommunicable disease risk factor surveillance (WHO; 2017).

In the statistical analysis were used descriptive measures and distribution of frequencies according to characteristics of participants presented in tables and graphs. Tests for measure statistical significance between characteristics were used prior to analyse parametric and non-parametric variables. To assess the significance of the difference between lifestyles of students and socio-demographic characteristics and socio-economic was used Hi square with the value of statistically significance $p < 0.05$. The statistical package for social sciences was used in data processing (SPSS for Windows, version 21.0, 2012).

RESULTS AND DISCUSSION

Students at the faculty of health sciences, those sampled were 137, among males are 24,1% and females 75,9%. Most of them are in group of young adults between 18-22 years (49,6%), living in urban places (88,3%) and with educational background of health sciences (67,9%) (Table 1). More than a half of respondents perceive their socio-economic status as a good (66,4%) and each eight of ten participants lives with a family or friends in primary social unit of community (Table 1).

More than a half of respondents (64,2%) have experienced working in health institutions and therefore it would be possible to be a role model for healthy lifestyles not only for peers, than prior for patients and other people in community.

Table 1. General characteristics of participants (N= 137)

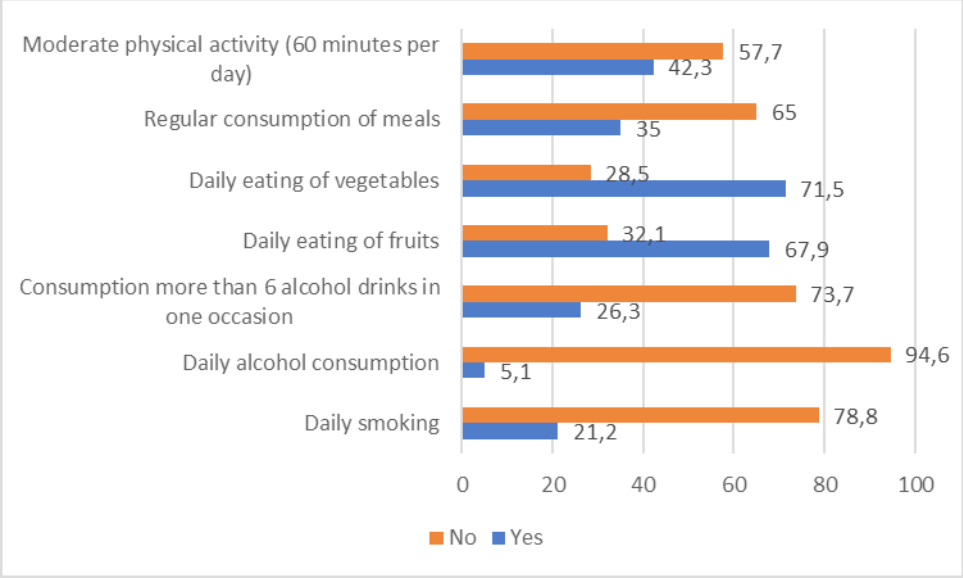
Sociodemographic characteristics	N	%
Gender		
Male	33	24,1
Female	104	75,9
Age groups		
18-22	68	49,6
23-27	40	29,2
8+	29	21,2
Place of resident		
Urban	121	88,3
Rural	16	11,7
Educational background		
Secondary school in health sciences	93	67,9
Secondary school in other sciences	44	32,1
Socio-economic status		
Good	91	66,4
Average	43	31,4
Low	3	2,2
Living with a family and friends		
Yes	113	82,5
No	24	17,5
Experience of working in health institution		
Yes	88	64,2
No	49	35,8

More than a fifth of students are daily smokers, less but not small percent of students are daily consumers of alcohol (5,1%) (wine/beer more than 1 dcl, spirits more than 0,05 dcl and coloured flavoured drinks more than 2 dcl) (Graph 1). Very important risk of youth lifestyle habits is consuming more than a six alcohol drinks in one occasion, and it is usual among 26,3% of students of health sciences. This indicator of youth health risks for developing NCD is measured value for all preventive activities which have to be done in school and university environment.

More than a third of students (35,0%) have regular meals, including 3 main and 2 additional, snack meals. More than a half of them eat fruits daily (67,9%) and more than a two third of them eat vegetables daily (71,5%) (Graph 1).

Moderate level of physical activity according to general recommendations of World Health Organization for young adults takes 30 minutes to one-hour of fast walking, swimming or bicycle riding which have 42,3% of students (Graph 1).

Graph 1. Percent of lifestyles habits among students



Risk factors for developing NCD are present in population of students. More than a fifth of females are smokers (24%), statistically significant more than males (12,1%) ($p<0,05$). The greater number of smokers is among young adults older than 28 years (Table 2). Smokers are living mainly in urban areas, with good socio-economic status and general educational background (31,6%). Most of smokers are among students who don't have experience of working in health institutions (26,5%).

Daily consumption of alcohol is six time more among males (12,1%) than females (2,9%) ($p<0,05$). Students with technical background consume alcohol daily more (8%) than others and they who are not living with family and friends (16,7%).

Less than daily use of fruits has more males (39,4%) than females (29,8%) (Table 2). Also, those habits have students who are living in urban places (34,7%) average socio-economic status (44,2%), and general educational background (47,4%) and those who don't have experience of working in health institutions (28,6%).

Less than daily use of vegetables has more males (33,3%) than females, youngers in 18-22 age groups (32,4%), general background (36,8%) living in urban areas (30,6%) and more than a third of those who don't have experience of working in health institutions.

Intakes of food not regularly have more females (68,3%) than males (54,3%), students with general background (73,7%) and those who have no experience of working in health institutions (73,9%) ($p<0,05$) (Table 2).

Physical inactivity is persistent among females (63,5%) more than males (39,4%) ($p<0,05$), students ages 28 and older (69%), are living in rural areas (75%), and in average socio-economic status (67,4%) ($p<0,05$) (Table 2).

Table 2. Sociodemographic and socioeconomic differences in lifestyles risks for developing NCD among students

Sociodemographic characteristics	Variable types	Daily smoking (%)	Daily alcohol consumption (%)	Consumption of more than 6 alcohol drinks in one occasion (%)	Less than daily use of fruits (%)	Less than daily use of vegetables (%)	Intake of foods not regularly (%)	Physical inactivity (%)
Gender	Male	12,1	12,1*	42,4*	39,4	33,3	54,5	39,4
	Female	24,0*	2,9	21,2	29,8	26,9	68,3	63,5*
Age group	18-22	14,7	4,4	33,8*	32,4	32,4	55,9	51,5
	23-27	25,0	7,5	30,0	27,5	27,5	72,5	60,0
	28+	31,0	3,4	4,3	37,9	20,7	75,9	69,0
Place of living	Urban	22,3	6,3	24,0	34,7	30,6	66,9	55,4
	Rural	12,5	5,0	43,8	12,5	12,5	50,0	75,0
Socio economic status	Good	22,0	6,6	29,7	26,4	25,3	60,4	54,9
	Average	18,6	2,3	20,9	44,2	32,6	74,4	67,4*
	Bad	33,3	0	0	33,3	66,7	66,7	0
Educational background	General	31,6	5,3	15,8	47,4	36,8	73,7	52,6
	Medical	18,3	4,3	26,9	31,2	26,9	66,7	55,9
	Technical	24,0	8,0	32,0	24,0	28,0	52,0	68,0
Living with family and friends	Yes	23,4	4,7	29,1	34,5	31,9	65,5	59,3
	No	16,7	16,7	16,7	20,8	12,5	62,5	50,0
Working experience in health institution	Yes	18,2	4,5	25,0	31,8	26,1	73,9*	59,1
	No	26,5	6,1	28,6	32,7	32,7	49,0	55,1

*- χ^2 ($p<0,05$)

In our study every fifth student smokes daily, less than in Poland study where every sixth student declared smoking, and more than 90% consumed alcohol (Jakubiec, 2015). In study provided among university students in Sarajevo (Brankovic, 2017) was the same percent of smokers like in our study. In Croatian study every third student smoked cigarettes every day (Malatestinić, 2015) and girls consumed more cigarettes than males, as well as in our study. In Croatian study, similar in our study, students consumed alcohol in one occasion, especially males but number of daily alcohol consumers is approximately 5% as well as in our study. Excessive alcohol drinking among males younger than 25 was in Americas study (US Department of Health and Human Services, 2015) which is associated with risk habits for NCD when youngers have experimental phases during occasions. British and Croatian authors describe the same situations between youngers male (Kuzman, 2004, Deetles, 2002). More than a third of students have regulary meals which is similar to study provided in University of Sarajevo and more than in Poland study, where each ten students consumed regulary meals. In study in Kuwait students have regulary meals in more than two third of cases, and most of them consume daily fresh fruits and vegetables (Al-Sayeg, 2020). More than a two third of students in Banja Luka consumed fruits and vegetables daily while in German study 12,6% students consumed fruits and vegetables daily. (Tobish, 2015).

Moderate physical activity has under half of students in our study which is less than in Sarajevo University, but in Poland study most respondents preferred passive forms of recreation, only one in three practiced sports in their spare time. Moderate physicial activity have about half of students in German and Kuwait study.

Compare lifestyles between students' population in different countries of Europe and broader there are no big differences with significantly increased of risk for developing NCD among females more than males.

CONCLUSIONS

Lifestyles of students of Health Sciences at Apeiron University in Banja Luka are positive habits for healthy choices in more than two thirds of them who eat fruits and vegetables daily, half of them who have moderate physical activity and more than third of them who have regular meals. Risks for developing NCDs are persisted among more than fifth of them who are daily smokers and consumers more than six alcohol drinks in one occasion. Changes in those habits have to be the result of environmental and societal changes associated with supportive policies in sectors such as health, agriculture, urban planning, marketing and education. According to WHO Health in All policies all of us in different sectors must be educators for young people, who live and work with us in family and community.

Promoting healthy lifestyles among students will save future families, communities and countries.

CONFLICT OF INTEREST
The authors declare no conflict of interest.

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