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KNOWLEDGE OF CARDIOVASCULAR RISK FACTORS IN UNIVERSITY STUDENTS

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Abstract

The incidence of cardiovascular diseases has reached alarming figures in many regions of the world, including Ecuador. One of the objectives of medical universities is to train professionals capable of transforming the health status of the population from primary health care, in order to achieve the prevention of modifiable cardiovascular risk factors through changes in lifestyle.
Objective: To determine the level of knowledge about cardiovascular risk factors in university students of the Faculty of Medical Sciences of the University of Guayaquil of Ecuador.
Methods: This is a quantitative, observational, descriptive and cross-sectional study conducted at the Faculty of Medical Sciences of the University of Guayaquil. The population consisted of a total of 183 students and the sample was made up of 125 students.
Results: The students of the Obstetrics and Bachelor of Nursing degrees have less knowledge about cardiovascular risk factors than the students of the Medicine, Medical students (86%) and nursing (71%) consider cardiovascular diseases as the main causes of death, while those of obstetrics barely 40%, prioritizing almost to traffic accidents as one of the first causes.
Conclusions: The needs to actively incorporate health promotion from university classrooms to incorporate in the mental structure of students and teachers the imperative need to generate individual changes and then generate health in society were identified.

Keywords: Risk Factors; University Students; Health Promotion.

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1. Introduction

Chronic non communicable diseases are the main health problems that Ecuador, America and the world must face.[1] Cardiovascular diseases (CVD) are the leading cause of death in the world. Such diseases can be prevented by cardiovascular control risk factors.[2] In Ecuador, non-communicable

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diseases such as diabetes, hypertension, strokes and ischemic heart disease are responsible for the morbidity and mortality of the Ecuadorian population, with cardiovascular diseases being first cause of death according to the Latest report of the Ministry of Public Health and PAHO.

Having the overwhelming evidence that these are linked to four risk factors such as: poor diet, physical inactivity, sedentary lifestyle, alcohol and tobacco consumption.

Cardiovascular diseases provide the greatest burden of mortality worldwide. Studying the degree of knowledge of risk factors and cardiovascular risk is a priority preventive strategy.[3] These diseases are associated with risk factors such as smoking, sedentary lifestyle, obesity and hypertension.[4] Several studies have shown that this is a gradual process that begins during the first or second decades of life until the onset of clinical manifestations at ages later[5] Lack of effective policies prevent alcohol and tobacco consumption from declining in the population, especially in young people. The bad eating habits acquired by the scarce nutritional information, education, lack of interest in the formation of healthy habits are responsible for the poor selection of nutritious foods and the physical activity that has come at least in the last decades that coincides with the great technological advances, aggravates the situation of risk factors with non-communicable diseases, so much that WHO recommends that the countries of the world set the main objective to reduce physical inactivity by 25% in the next 25 years.

Health greatly influences the lifestyle. The health care of men and women cannot be alien to their working conditions, nor to gender-related social roles, nor to their beliefs, values or attitudes.[6, 7] It is undeniable that interventions in this area will be costly, but not taking measures would be much more expensive because of the obligation of states to intervene in the public health of their peoples. In addition to this, data from the PAHO health observatory in Washington 2014 indicate that many people die in their most productive years, what we know as premature death, this will bring great social repercussions on individuals and their families, workplaces and the economy in general due to the loss of human talent and useful labor for the development of communities. Having this challenge, to face the disease knowing the economic and social cost it has.

2. Material and Method

The study that is carried out is of an observational, and descriptive transversal type of non-experimental design. Methods were used. In order to obtain information, a questionnaire was designed and applied to the students that make up the sample in Medicine, Nursing, Obstetrics, in the Faculty of Medical Sciences of the University of Guayaquil of Ecuador.

The research is carried out at the end of the first period of the fifth period of each year presenting a population of 183 students at the time of the study, sample formula is applied, with 95% reliability and a 5 margin of error, resulting in a sample of 125 university stude from medical careers (50), nursing (35) and obstetrics (40). The students are of both sexes with an age that varies on average 21 and 23 years, attend half of their careers and already have basic knowledge regarding human health, especially medical students who have in their curriculum the subject of cardiology unlike the other careers. A questionnaire with closed questions was made to know the level of information that university students of the Faculty of Medical Sciences have in relation to

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cardiovascular risk factors. The data was processed in the IBM SPSS Statistics 2016 system. Absolute frequency and percent calculations were performed.

3. Results

The Table 1 shows the knowledge of the surveyed students about the first cause of death in Ecuador, medical students (85%) and nursing (60%) consider cardiovascular diseases, while obstetrics students only 40%, they recognize them as such, giving great importance to traffic accidents

Table 1: Information on the first cause of death in Ecuador

Causes	**Obstetrics**	**%**	**Medicine**	**%**	**Nursing**	**%**
Cardiovascular diseases	16	40%	36	85%	27	60%
Traffic accidents	14	35%	3	7%	6	22%
AIDS	1	3%	0	0%	0	0%
Cancer.	5	13%	2	4%	3	11%
Other	4	10%	1	2%	2	7%
Total	40	100%	42	100%	38	100%

Table 2 shows the information of the students in relation to cardiovascular risk factors. Most students of the School of Medical Sciences consider poor diet and physical inactivity as the main cardiovascular risk factors, however. However, only 19% of medical students consider stress as a risk factor and 8% of Nursing Degree think the same. On the other hand, it is necessary to highlight that only 2% of medical students relate tobacco and alcohol consumption to cardiovascular diseases

Table 2: Risk factor most detrimental to cardiovascular health: Cause Obstetrics% Medicine% Nursing%

Cause	**Obstetrics %**		**Medicine %**		**Nursing %**	
Tobacco	1	3%	1	2%	0	0%
Alcohol.	1	3%	1	2%	2	5%
Physical inactivity	12	30%	16	38%	9	24%
Bad diet	23	58%	16	38%	21	55%
Stress	3	8%	8	19	6	16
Other	0	0%	0	0%	0	0
Total	40	100	42	99	38	100

Table 3 shows the ways in which students of the Faculty of Medical Sciences receive information on the subject. 50% of obstetrics students say they receive information about cardiovascular risk factors in their classes. On the other hand, only 24% of medicine affirm this way to receive the information. It is important to consider that 2% of Nursing students receive this information from their teachers, so it is necessary to emphasize the preventive aspects of diseases from the curricular level, not only to address the curative but to go further, that is to avoid the possible causes or risk factors that can influence diseases of the cardiovascular system.

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Table 3: Ways by which they receive information on cardiovascular risk factors

	Obstetrics	%	Medicine	%	Nursing	%
Classis	20	50%	10	24	29	2%
Internet	10	25%	19	45	2	5%
Family	5	13%	8	19	6	16%
Average	5	13%	5	12	1	77%
Total	40	100%	42	100	38	100%

Table 4 shows the students' knowledge regarding cholesterol levels. It is striking that medical students 38%, obstetrics 25%, and nursing 16% do not know the normal values of cholesterol or its parameters.

Table 4: Assessment on cholesterol figures of 160 mg

	Obstetrics %		Medicine %		Nursing %	
is normal	15	38%	4	9%	10	26%
is above normal	10	25%	17	41%	14	37%
is below normal	5	13%	5	12%	8	21%
don't know	10	25%	16	38%	6	16%
Total	40	100	42	100	38	100

Table 5 shows the information of the students regarding Diabetes and the development of cardiovascular diseases. 50% of the university students of the Faculty of Medical Sciences, of the careers of Obstetrics and Medicine do not know or do not consider that Diabetes favors the development of cardiovascular events, a significant fact if one considers that the students surveyed already belong to the higher years of the careers.

Table 5: Student information regarding diabetes and the development of cardiovascular diseases.

	Obstetrics	%	Medicine	%	Nursing	%
Diabetes and cardiovascular diseases are not related	0	0%	0	0%	0	0%
suffering from diabetes favors the development of cardiovascular diseases	20	50%	20	50%	17	45%
having diabetes does not favor the development of cardiovascular diseases	15	38%	15	38%	15	39%
don't know	5	13%	5	13%	6	16%
Total	40	100%	40	100%	38	100%

4. Discussion

The information of cardiovascular risk factors in a university student of health sciences is an indicator of the empowerment by the new professional about the imperative need for changes in their habits and behaviors, considering that there could already be a disadvantage in the biological component. In a descriptive, observational and cross-sectional study in students of the Catholic

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University of Murcia, on university habits, it can be seen that 36% are active smokers and 17.4% are former smokers. 87.4% of the students who were part of the study drink recognizeing alcoholic beverages. 65.6% of the students surveyed report exercising regularly1. The incorporation into tobacco consumption is a long and complex process of formation of attitudes towards tobacco, a process generally unknown, for which various theoretical models have been proposed.[8] It is clear that young people even having knowledge that the aforementioned factors can affect their health they continue to practice them. The lifestyle of university students is not always favorable to their health in what perhaps influences the conception of the race since they do not have enough time to practice physical exercises and socioeconomic status because not all of them have the necessary resources to maintain food. In the study conducted on the students of the medical science faculty, they consider that alcohol and tobacco do not influence cardiovascular risks, do not give not give enough importance to these practices.

In a study on the degree of young people's knowledge of cardiovascular risk factors in an outpatient population of the Community of Madrid.3 The results mention that 49.6% were men and 50.4% were women. 23.8% have hypertension, 39% hypercholesterolemia, 31.4% smoking, 26.3% and 4.6% in diabetes. The agreement between cardiovascular risk and the real one was very weak. The European population knows about diabetes, hyperlipidemias in particular hypercholesterolemia, hypertension, but little knowledge in prediabetic states and in the perception of cardiovascular risk. In this study, students of the Faculty of Medical Sciences, who by the career profile should have more information about cardiovascular risk factors. The students of medicine (86%) and nursing (71%) consider cardiovascular diseases as the main causes of death, while those of obstetrics barely 40%, prioritizing almost traffic accidents as one of the first causes. 50% of the university students of the Faculty of Medical Sciences, especially in the careers of Obstetrics and Medicine do not know or do not consider that Diabetes favors the development of cardiovascular events, a fact that attracts attention due to the level of training they are in. An investigation of cardiovascular risk factors in adolescents of an institution of higher education in the district of Barranquilla, Colombia, showed that adolescents were more likely to develop cardiovascular disease in the future, given the behavior of risk factors, such as obesity and sedentary lifestyle4. Regarding the importance of these risk factors, the students of the Faculty of Medical Sciences of Obstetrics consider that obesity and AHT (88%), sedentary lifestyle and diabetes (65%), have a great and great influence on cardiovascular events. 25% do not consider diabetes as an important disease factor even having knowledge about the, alcohol (73%) and stress (63%). Medical students considered hypertension (93%), hypercholesterolemia (93%) and sedentary lifestyle (88%). While nursing considers all the mentioned factors between 50 and 60% but they do not indicate a particular factor as directly responsible for cardiovascular events. However, even considering hyperlipidemias as an important risk factor, they do not know their normal values and 16% of the students of the Faculty of Medical Sciences do not know the value of HDL and LDL levels, many of them or They don't know the value or consider the HDL bad and the LDL good, that is, they don't know the difference.

A study conducted in Argentina8 found that cardiovascular risk factors were in the following order: Firstly: tobacco abuse, high blood pressure and hypercholesterolemia.
Second: diabetes, obesity and inactivity.
The type of behavior is probably the key in the etiology of coronary heart disease.

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The knowledge of cardiovascular risk factors in university students in an important factor to be taken into account by teachers who, from their subjects, must be transmitters of the aspects related to primary health care.[9]

In a study conducted by Cangas de Morrazo, Pontevedra, Spain, to know cardiovascular risk factors (CVR) in a sample of adolescents, the cross-sectional observational study shows that adolescents aged 12 to 17 years, despite their young age and over 10% have 2 risk factors. More than 50% presented abnormal SBP values, 20%, overweight, and almost 25%, abnormal waist circumference values.4 Hence the urgency of intervention from the university to address these factors that aggravate the situation of health of the countries due to the high cost it will have in the intervention of the pathologies and the social burden they represent.[10]

It is necessary for the University to pronounce itself to include related aspects to health promotion and prevention of risks and diseases in the curriculum of Medicine, Obstetrics and Bachelor of Nursing. The relevance of the present work is manifested in the need to establish strategies of promotion and prevention important for the development of health in young university students since as future health professionals must know the risk factors of cardiovascular diseases to be able to influence the integral health of the human being, based on the various forms of health promotion and disease prevention. It matches it with a job.[11]

If one takes into account that students entering university undergo particular conditions given by the academic environment itself. The new academic situation can produce changes in their lifestyles, with positive and negative implications. This stage of university is considered critical for the development of their eating habits, characterized by having little time to eat, skipping meals frequently, eating between meals, high consumption of fast food, others. In addition to this, they present a decrease in the practice of physical activity due to the boom that passive entertainments have had. [12]

The university stage constitutes a transition process towards adulthood, which implies an increase in independence, autonomy and responsibility. At this stage, eating habits are not well established[13]. These young people usually consume unhealthy foods loaded with fats and sugars whose consumption constitutes a risk factor for cardiovascular diseases. Studies carried out by other authors in a Chilean university14 have obtained as a result that weight gain, in the years of permanence in the university, reported an increase of 1.5 kg of body weight and 1.1% in the percentage of body fat.

Despite the progressive increase in the world of the prevalence of excess weight and the extensive documentation on the consequences associated with unhealthy habits, there is evidence that shows that there is a high proportion of young adults, especially university students, who assume this type of behaviors that are harmful to your health [15,16]

It is necessary to take into account in the design of the curriculum of the careers of medical sciences, the link between the contents of the first years of the career and the field of the profession in search of a better development of the educational teaching process , in response to the scientific advances and the tendencies of the Medical Education, fundamentally with the orientation to the

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Primary Attention. The amount of time allocated to the contents linked to the community must be increased, a scenario in which the professional to whom the career profile responds is developed.

5. Conclusions and Recommendations

A level of adequate information on the factors influencing cardiovascular disease decreases the risk of suffers, which is relevant, since in Ecuador these are the leading cause of death. The Ministry of Public Health should allocate resources to both the prevention and treatment of this disease, whether in health campaigns, research work, medicines, among others.

There is an urgent need to look for strategies that allow the university student of the Faculty of Medical Sciences to empower the knowledge with sufficient knowledge about cardiovascular risk factors and appropriate lifestyles that allow cardiovascular reduction diseases and improving health rates in the Republic from Ecuador

6. Confidentiality

The personal data of the patient has been protected as indicated by medical ethics

Conflict of Interests.

The authors declare that does not exist an interest conflict.

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