Asesorías y Tutorías para la Investigación Científica en la Educación Puig-Salabarría S.C.
José María Pino Suárez 400-2 esq a Lerdo de Tejada. Toluca, Estado de México. 7223898475
RFC: ATI120618V12

Revista Dilemas Contemporáneos: Educación, Política y Valores.
http://www.dilemascontemporaneoseducacionpoliticayvalores.com/
Año: VI Número:3 Artículo no.:60 Período: 1ro de mayo al 31 de agosto del 2019.

TÍTULO: Diferentes entornos de aprendizaje en el desarrollo de conocimientos sobre enfermedades contagiosas: una prueba para estudiantes universitarios.

AUTORES:

1. Ph.D. stud. Azadeh Ghafourian Alizadeh Tabrizi.

2. Prof. Mustafa Sağsan.

RESUMEN: Este estudio investigó el nivel de conciencia de los estudiantes de pregrado sobre el VIH y los virus de la hepatitis. Las estadísticas descriptivas, así como la correlación bivariada se han utilizado para encuestar los datos. Los resultados mostraron que la mayoría de los estudiantes de pregrado en la Universidad del Cercano Oriente tienen un alto nivel de conciencia sobre el VIH, mientras que un número significativo de ellos no tiene suficiente conocimiento sobre el virus de la hepatitis. Se encontró una correlación positiva significativa entre el nivel de conciencia de la hepatitis y la actitud de los estudiantes hacia los esfuerzos de la familia para educarlos sobre enfermedades contagiosas.

PALABRAS CLAVES: Concientización sobre enfermedades contagiosas, hepatitis, virus de inmunodeficiencia humana, Chipre del Norte, entornos de aprendizaje.

TITLE: Different Learning Environments in Developing Knowledge about Contagious Diseases: A Test for Undergraduate Students.

AUTHORS:

1. Ph.D. stud. Azadeh Ghafourian Alizadeh Tabrizi.

2. Prof. Mustafa Sağsan.

ABSTRACT: This study investigated the level of awareness of undergraduate students on HIV and Hepatitis viruses. Descriptive statistics as well as bivariate correlation has been used in order to survey the data. Results showed that the majority of undergraduate students at Near East University have a high level of awareness about HIV, while a significant number of them do not have sufficient knowledge about Hepatitis virus. A positive significant correlation between the level of Hepatitis awareness and students' attitude towards family efforts on educating them about contagious diseases was found.

KEY WORDS: Awareness of contagious diseases, Hepatitis, human immunodeficiency virus, Northern Cyprus, Learning environments.

INTRODUCTION.

The importance of the awareness of contagious diseases cannot be underestimated, especially in developing countries, as it can play an important role in prevention and control as well as maintaining a healthy society.

The main objective of this study is to examine the awareness and knowledge of undergraduate students of Northern Cyprus concerning human immunodeficiency virus (HIV) and hepatitis. Another objective of the research is to determine if there is a significant difference between different learning environments and the level of knowledge about HIV and hepatitis among students or not. By studying a large number of students in Near East University of Northern Cyprus (as a large volume of data), the study aims to discover if there is a relationship between the attitudes of undergraduate students about different learning environments and their level of knowledge on contagious diseases.

DEVELOPMENT.

Study background.

Due to the increase in various contagious diseases in many countries in recent years, applying the right learning concepts on health issues among individuals has been considered more than ever before.

In July 2017, the European Parliament reported that the number of HIV and HCV (Hepatitis C Virus) epidemics have been on the rise in European countries. Furthermore, according to the World Health Organization, from 2000 to 2015, the number of deaths due to hepatitis B and C have increased by 22%.

In regard to the importance of sustainable development strategies, the Global Health Organization has approved an approach in order to increase the awareness on infectious diseases, as well as to reduce the number of infected individuals (Accelerating Work To Overcome The Global Impact, 2011). These infectious diseases include AIDS (acquired immune deficiency syndrome), tuberculosis, malaria, hepatitis and neglected tropical diseases. In order that, new strategies may provide opportunities for a constant effort by different groups all around the world.

The expansion of universal health coverage, ensuring equity and respecting for human rights, establishing new strategies to distribute information within health, and strengthening of health systems with integrated delivery of interventions are among the most important plans for developing the necessary knowledge and practices for the prevention and control of contagious diseases. Therefore, taking appropriate actions and necessary responses in order to have suitable policies to control these viruses need to be considered not only in the European Union, but also in neighboring countries.

Located in the Mediterranean Sea, Cyprus is an island that has opened its doors to many tourists and immigrants in recent years and welcomes different nationalities from all around the world. Many people travel on a daily basis between the Republic of Cyprus (which is a member of the European Union) and The Turkish Republic of Northern Cyprus (regarded as a self-governed state). Despite various governmental efforts aimed at preventing the outbreak of some contagious diseases on both sides, evidence shows that the risk of spreading some dangerous viruses is gradually increasing.

A study by the European Center for Disease Prevention and Control reported that in 2012, the rate of hepatitis C infections among those receiving drug treatment in the Republic of Cyprus has increased. According to the local press in the Republic of Cyprus (CyprusMail), in 2016, 66 new HIV infections were recorded were recorded from January to October. The same resource also announced that the level of knowledge and awareness of Cypriot society on matters concerning HIV is low and new cases are on the rise. Furthermore, there are many residents who inject drugs across the whole island and they have never been tested for HIV. Moreover, the Turkish Cypriot Daily (2017) announced that the increasing number of Turkish students and students from other countries on the island has increased the percentage of those with hepatitis diseases in the country.

Regarding these reports and the results of previous research, neglecting to mention the level of awareness of students and finding the most appropriate learning environment to develop their knowledge on this issue may lead to irreparable consequences in the future. Undergraduate students are considered as a population group who are vulnerable to the threats of contagious diseases.

A study by Kouta (2013) shows that immigrants from third countries in Cyprus do not have sufficient knowledge related to HIV and sexually transmitted infections. Therefore, as the number of foreign students on the island is about to increase every year, the need to have a detailed view about their knowledge and attitudes towards contagious diseases and the ways that they acquire this knowledge should come to consider more than any time.

A learning process applied in the right environment allows students to increase their knowledge on this issue, and subsequently, it will help them to avoid risky behaviors by means of necessary education. It will be beneficial for students to take appropriate decisions when they face related issues. Different environments may play different roles in educating young people. According to Woolf et al. (2011), personalized learning carries significant promise in improving the state of education in developing countries. Hence, it is important to conduct research about the level of knowledge of undergraduate students about the threat of contagious diseases and possible ways of becoming infected with HIV and hepatitis. On the other hand, parents' effort to maintain good communication with children is considered as an important element for increasing their health knowledge. Moreover, the considerable role of peers on young groups' health behaviors cannot be neglected. They may have a valuable contribution to enhance related awareness in order to prevent contagious diseases.

Peer-to-peer knowledge exchanges enable dynamic knowledge transfer and can also enable interaction among knowledge owners (Holsapple, 2013). Above all, many still believe that traditional media like radio and television still have an important role in controlling diseases caused by HIV and Hepatitis viruses; thus, by understanding the more trustable learning tools from the opinions of students, authorities will be informed about the best practices for educating youth on contagious diseases.

The results of the study may help the authorities of Northern Cyprus to establish new rules and strategies in order to increase the level of knowledge about contagious diseases among students through the implementation of best available practices which can be adopted according to the students' preference or interests.

Research questions.

This research aims to answer the following questions:

- What is the level of undergraduate students' knowledge about the HIV virus?

- What is the level of undergraduate students' knowledge about the Hepatitis virus?

- What is the main resource for students to learn about contagious diseases?

- When was the first-time undergraduate students became aware of the presence of HIV and Hepatitis viruses?

- Is there any significant correlation between the level of knowledge on HIV among undergraduate students and their attitude toward any learning environment?

- Is there any significant correlation between the level of knowledge on Hepatitis among undergraduate students and their attitude toward any learning environment?

Literature review.

The United States Department of Health and Human Services defines a contagious disease as "a very communicable disease that can spread rapidly from person to person through direct contact, touching an infected person, indirect contact, touching a contaminated object, or droplet contact - inhaling droplets made when an infected person coughs, sneezes, or talks -" (Contagious Disease, 2018). In other words, contagious diseases include diseases spread by person to person contact like diphtheria and influenza, infections spread by sexual contacts like syphilis and herpes, and diseases spread by blood and body fluids, such as HIV, hepatitis B and viral hemorrhagic fevers. However, the HIV and hepatitis viruses tend to be transmitted by sexual activities as well.

In 2016, the number of deaths due to HIV and AIDS reached almost 1 million, which makes it one of the communicable diseases that causes the most fatalities worldwide. Hepatitis C is considered as another important worldwide infectious disease, since it caused 399,000 deaths in the same year. In the year 2017, 325 million people around the world were living with Hepatitis B or C, which put them at risk of progressing to chronic disorders of the liver, and subsequently to cancer and death.

1. HIV. The human immunodeficiency virus (HIV) is a virus that infects cells of the immune system, destroying or impairing their function. Infection with the virus results in progressive deterioration of the immune system, leading to "immune deficiency".

A factor that is sometimes neglected in developing countries is the unknown number of people with HIV who are aware of their status, and the number of people with HIV who do not have any awareness of the infection, which means they are remaining as potential transmitters to others. Almost three decades ago in the year 1981, HIV was recognized for the first time as a contagious among homosexual men in Los Angeles (Shah, 2013), and became one of the most significant epidemics in modern history. Since there is no any vaccine to prevent HIV, in most countries, governments consider a certain amount of their budget in order to educate young people about the risk of the virus and for prevention planning. Some of these efforts are as follows:

- Sex education and HIV education interventions in schools.
- Distribution of free condoms in health centers.
- Distribution of free needles to drug addicted people.
- HIV tests for couples who aim to get pregnant.
- Free consultation for everyone in order to give requested information to people in health centers.

However, above all, the social environment education plays an essential role in preventing contagious diseases in each society. Sex education and HIV education interventions in schools and families need to be mentioned in every country, especially those that are developing.

In Ukraine, which has the highest rate of HIV infection in Europe, the number of families that are not able to provide the basic conditions for the education of children and youth has increased in recent years as a result of economic problems. Thus, in order to provide continuity, succession, timely services, accessible information for young people, and to provide consistency and better co-ordination of prevention activities at the national and local levels, some NGOs like the State Institute

of Youth and Family Issues, with the help of volunteers and private media, started to develop appropriate education for teenagers and the young population (Lazorenko, 2004).

Education should teach people what to learn and how to learn, and should also utilize the best methods to improve the learning process, which provide adolescents with more general skills that help them engage in healthy behaviors and solve problems. In some African countries such as Kenya, where the risk of being infected by HIV virus is high, small clubs for increasing the awareness of the HIV virus among teachers and students have been developed in the past decade.

2. Hepatitis. Hepatitis involves the inflammation of the liver. The condition can be self-limiting or can progress to fibrosis (scarring), cirrhosis or liver cancer. Hepatitis viruses are the most common cause of hepatitis around the world but other infections, toxic substances (e.g. alcohol, certain drugs), and autoimmune diseases can also cause hepatitis.

The history of viral hepatitis dates back thousands of years when humans were first infected (most probably with hepatitis B virus) and a natural repetitive cycle started. The virus had the capacity to infect thousands of people; however, the individualization of several types of hepatitis only emerged after the Second World War (Trepo, 2013).

Hepatitis is a global epidemic, with distinct regional patterns. For example, in Africa alone, 100 million people are infected by Hepatitis B virus, and 19 million have hepatitis C (How hepatitis became a hidden epidemic in Africa, 2017). By the end of 2012, an estimated 17 million people in Eastern Mediterranean countries will have suffered from chronic HCV infection and the concerns for a Hepatitis epidemic in this region have increased.

Multimedia programs such as animations, figures and images are particularly beneficial in order to educate people (especially those who are more vulnerable such as those who have HIV) for preventing the Hepatitis virus (Mayor et al., 2013). Due to this issue, in recent years, many countries

have introduced various strategies such as prevention education along with vaccination programs in order to increase the awareness of the virus and the ongoing epidemic.

3. A review on different learning environments on increasing the level of knowledge about HIV and Hepatitis.

According to a study on knowledge about HIV and its determinants among men in Bangladesh, sufficient educational level, reading newspapers, and watching TV were positively related to the level of knowledge about HIV. There should be increased focus on HIV and AIDS content of education in each country.

A suitable education system must adapt in order to meet the needs of vulnerable groups in terms of appropriate programs, as it will increase the general level of knowledge about contagious diseases among individuals, as well as strengthening links between formal and non-formal systems. Teaching methods and curricula will also need to change to provide new knowledge, skills, attitudes and values and to meet the needs of learners.

Different education systems in each country need to strengthen the HIV and Hepatitis awareness, and should try to help learners to cope with prevention and control, as well as providing appropriate consultation and guidance for different groups in the society, specifically young people, in order to help them to increase their skills. This should be complemented by vocational training in different academic areas such as school and universities, and also traditional and new media.

Raising awareness and increase the rates of diagnosis, monitoring and treatment require significant consideration from local and national parties in order to establish appropriate strategies. Suitable media coverage (whether from radio and television or via official and reliable websites and online news) may consider health goals and should aim to convince citizens to seek testing and consequently, appropriate care. However, misinformation and the tendency to sensationalize in news reports can have the opposite effect and increase the rate of anxiety as well as mistrustfulness in relation to media

coverage among audiences (Drazic et al.,2017); for instance, hepatitis organizations in Australia have found it difficult to provide services that offer reassurance, accurate information and support to help people become more active in their care. According to that study, for example, the reality that most existing Hepatitis C virus infections are the result of mother-to-child transmission is completely ignored in some news coverage, so it may result in increasing confusion and it is also a sign of the lack of awareness of vertical transmission among media channels. Therefore, of the lack of sufficient awareness and poor reporting about diseases in national media could lead to misunderstanding and ultimately distrust of different groups of audience towards official news channels. Therefore, it is important to first build a reliable and trustable media and second, to investigate the attitudes and opinions of individuals (citizens including school and university students) towards the media as an important source of learning about contagious diseases. On the other hand, the role of the family environment should not be neglected. In developed countries, students are strongly encouraged to take responsibility for their own future health in a mature way.

According to Gurney (1998), the family environment is a crucial factor, in which communication, self-awareness, influence of behaviors about relationships, emotional developments and cognitive learning, all come together. It is considered as an important learning environment when it comes to contagious diseases, since in modern consumer societies, coping with pressures and dealing with dangerous threats need to be addressed in a systematic balanced way, whereby families can play a significant role in this process for the younger generation. A similar solution can be considered when experts investigate the role of peers in increasing the awareness of diseases among young people; for instance, in some countries, there is a tendency to use celebrities in related advertising campaigns in order to influence and encourage young students to quit smoking and make them aware of the possible side effects of smoking in the future.

Some countries are providing adolescents and young adults with access to peer consultation from certified educators without discrimination in order to increase the knowledge on HIV and Aids among students, so they will be more aware and know how to reduce the risk of being infected by the virus, by enabling community leaders to play suitable roles in the education system (Coleman, 2010).

4. Cyprus efforts on controlling HIV and Hepatitis – (Practical and academic): Most travelers to Cyprus are recommended to have the vaccination for hepatitis A, as well as hepatitis C, at least four weeks before departure, although it is not compulsory. In both the Republic of Cyprus and the Northern part, certified original medical examinations for Hepatitis B and C and HIV are requested in order to register for a residence permit for study and work.

According to a study conducted in the Republic of Cyprus in 2017, from 656 Cypriot respondents, seven in ten claimed that they never tested for HIV because they were sure that they were not at risk. Hence, the lack of education, and misunderstanding with regard to the HIV virus tend to be the greatest obstacles preventing effective control of the spread of the disease around the island. The Hepatitis B vaccination is available for all new born infants through the childhood immunization program established by the Ministry of Health of the Republic of Cyprus.

In terms of academic practices, universities in Northern Cyprus offer different symposiums, conferences and seminars related to HIV and Hepatitis control and prevention. Some universities such as the Eastern Mediterranean University of Famagusta are engaged in extracurricular activities, including various special events like the AIDS day, in which students and university staff try to raise the awareness of contagious diseases by means of participation in different activities via interpersonal communication, group discussion, as well as audiovisual technologies (EMU Students Walk to Raise Awareness for World AIDS Day, 2017). However, there has not been any related study about the real practices of raising awareness about contagious diseases via family members or radio and television in Northern Cyprus.

Two paradigms will be applied on this study. The first one is behaviorism attitude that regards the individual as a passive audience, waiting to be filled. In contrast, active learning theories with the connectivism perspective claim that knowledge is actively constructed by the learner and integrated with the individual's existing knowledge and experience. It emphasizes the individual's active role in learning and spreading knowledge, maintaining that the learning process is self-directed via the source, people, networks and mainly through the new media.

The behaviorism approach believes that knowledge exists independently and outside of people. Therefore, the learner is considered as a blank slate, and he/she should be provided with the experience. The role of the tutor is highlighted, and often he/she is seen as the dominant one, who has complete control. Tutors are considered as effective players when it comes to teaching, with the potential use of valuable tools for improving both learning and behavior of their students (Munkvold & Kolas, 2015). The theory highlights the role of environmental factors that may influence an individual's behavior.

Individuals learn new behavior by means of classical or operant conditioning. It emphasizes the roles that are performed by tutors in a professional capacity (Tummons, 2010), as well as the workshops, classrooms, offices, construction sites, and the college, adult education building, outreach center or family learning centers. Thus, a careful and sensitive approach is required to fulfill the need for learning subjects. It is necessary to be mentioned the specific context within which the community teacher operates.

On the other hand, the connectivism approach tries to explain education as a process that takes place with the support of ICT tools (Klement et al., 2017) within a computer network environment surpassing the individual. The idea is adapted from the Piaget cognitive learning theory, which states that individuals, especially in their childhood, are able to learn cognition, and think at their own leisure. In other words, every learning process is deeply individual, that is to say that knowledge is

formed by each person's own experiences and interpretations of the world. Therefore, it is not surprising that in the modern age, internet and mass media messages have an important role in increasing knowledge about contagious diseases and they can serve as beneficial tools for encouraging protective behaviors (Ugarte et al., 2012). Hence, the learning process can be considered as a social activity in which students are encouraged to talk about what they have learned and are motivated to share their knowledge with others.

Based on the theoretical framework and conceptual model, the following research hypotheses are proposed:

Hypothesis one: Undergraduate students have a sufficient level of knowledge about the HIV virus.

Hypothesis two: Undergraduate students have a sufficient level of knowledge about the Hepatitis virus.

Hypothesis three: The majority of undergraduate students have a positive attitude towards university efforts to inform them about contagious diseases.

Hypothesis four: The majority of undergraduate students have a positive attitude towards family efforts to inform them about contagious diseases.

Hypothesis five: The majority of undergraduate students have a positive attitude towards friends/peers role informing them about contagious diseases.

Hypothesis six: Undergraduate students have a positive attitude towards media efforts to inform them about contagious diseases.

Hypothesis seven: There is a significant correlation between HIV awareness and students' attitudes toward specific learning environments.

Hypothesis eight: There is a significant correlation between Hepatitis awareness and students' attitudes towards specific learning environments.

Methodology.

This research is a cross-sectional study. The probable simple method of sampling is used for selecting the undergraduate students from Near East University in Northern Cyprus.

A questionnaire is used in order to collect data in this research. Data were collected through the intercept survey by the self-administered questionnaire. An intercept survey is a variation of the in-person survey, whereby information can be obtained from respondents as they pass by a populated public area. The interviewer intercepts individuals and asks them to participate in the survey (Rea & Parker, 2005). Questionnaire data were coded and analyzed by Statistical Package for the Social Sciences (SPSS).

In total, 120 undergraduate students participated in the study. There was no missed data. The Kendal Tau Coefficience has been used in order to test the correlations between variables. To examine the reliability of the questions, Cronbach' s alpha coefficient is used. The general rule of thumb for assessment reliability coefficients is: > 9 excellent, > 8 good, > 7 acceptable, > 6 questionable, > 5 poor and < 5 unacceptable" (Parnell et al., 2003, p.36).

In this thesis, the Cronbach's alpha value for questions related to the level of HIV knowledge is 0.755, which means acceptable, and for questions related to Hepatitis knowledge, it is .698, which is also very close to .7 and can be considered acceptable.

Findings and results.

In total, 120 undergraduate students (76 male and 44 female) participated in this study. They were from Nigeria, Turkey, Kenya, Russia, Iraq, Cameron, Zimbabwia, Pakistan, Kongo and Afghanistan. In terms relationship status, 113 students were single and only 7 were married. The majority of students (94%) were unemployed. They were studying in different departments including communication, mechanical engineering, international relations, business, tourism, pharmacy, psychology, architecture, banking and financial studies, and human resource management.

Table1. The level of awareness about HIV among undergraduate students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	19	15.8	15.8	15.8
	Average	22	18.3	18.3	34.2
	High	79	65.8	65.8	100.0
	Total	120	100.0	100.0	

As can be seen in Table 1, the majority of students showed a high level of awareness about HIV and possible transmission methods, while only 15.8% of them had a low knowledge of the virus.

Table 2. The level of awareness about Hepatitis among undergraduate students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	58	48.3	48.3	48.3
	Average	38	31.7	31.7	80.0
	High	24	20.0	20.0	100.0
	Total	120	100.0	100.0	

Table 2 indicates that more than 48% of undergraduate students in Near East University do not have sufficient awareness about the Hepatitis virus and related issues on the transmission of the virus.

Table 3. The ideal source of obtaining information about contagious diseases among students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	University	30	25.0	25.0	25.0
	Family Members	46	38.3	38.3	63.3
	Friends or Peers	28	23.3	23.3	86.7
	Media (TV, Radio, Social Networks)	16	13.3	13.3	100.0
	Total	120	100.0	100.0	

According to Table 3, the majority of Near East University students prefer to ask related questions about contagious diseases from family members, while only 16% prefer media (whether traditional or new) in order to get information about HIV or Hepatitis viruses.

Table 4. The source of getting informed about HIV and Hepatitis viruses for the first time among students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	University	45	37.5	37.5	37.5
	Family	30	25.0	25.0	62.5
	Friends or Peers	11	9.2	9.2	71.7
	Media (TV, Radio, Social Networks)	34	28.3	28.3	100.0
	Total	120	100.0	100.0	

A significant number of undergraduate students claimed that they have been informed about the presence of HIV and Hepatitis viruses through university and media (television, radio, social networking sites). According to Table 4, friends and peers were not significant sources in terms of informing students about the presence of HIV and Hepatitis viruses for the first time.

Table 5. Attitude towards university efforts to inform students about contagious diseases.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Negative	20	16	16	16
	Neutral	30	25.0	25.0	62.5
	Positive	70	58	58	100.0
	Total	120	100.0	100.0	

According to Table 5, the majority of undergraduate students at Near East University claimed that they have a positive attitude towards university efforts on informing students about contagious diseases. In other words, students believe that Near East University is trying to make students aware of contagious diseases by means of different programs and seminars.

Table 6. Attitude towards friends/peer role on informing students about contagious diseases.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Negative	22	18.3	18.3	18.3
	Neutral	49	40.8	40.8	59.2
	Positive	49	40.8	40.8	100.0
	Total	120	100.0	100.0	

Table 6 indicates that only 18.3% of undergraduate students do not believe that friends/peers have a role in informing students about contagious diseases. On the other hand, almost 80% of students claimed that they have a positive or neutral attitude towards their friends' role. In other words, peers including friends or classmates have a considerable role in making each other aware of different contagious diseases.

Table 7. Attitude towards family efforts on informing students about contagious diseases.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Negative	27	22.5	22.5	22.5
	Neutral	39	32.5	32.5	55.0
	Positive	54	45.0	45.0	100.0
	Total	120	100.0	100.0	

According to Table 7, almost 45% of undergraduate students have a positive attitude towards their family's efforts to inform them about contagious diseases. HIV and Hepatitis might be a subject of discussion between family members, especially parents and children, in order to inform each other about the methods of transmission or prevention of the viruses.

Table 8. Attitude towards media efforts on informing students about contagious diseases.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Negative	44	36.7	36.7	36.7
	Neutral	39	32.5	32.5	69.2
	Positive	37	30.8	30.8	100.0
	Total	120	100.0	100.0	

Table 8 indicates that the majority of undergraduate students at Near East university do not believe that media (traditional or new) has made sufficient effort in order to inform them about different subjects of contagious diseases.

Table 9. First time of being aware of HIV and Hepatitis.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Before the age of 18.	91	75.8	75.8	75.8
	After the age of 18.	29	24.2	24.2	100.0
	Total	120	100.0	100.0	

According to Table 9, 91% of undergraduate students have been aware about HIV and Hepatitis before reaching the age of 18.

Table 10. Correlation between attitude towards family efforts on informing students about contagious diseases and the level of hepatitis awareness.

			Hepatitis Awareness	Family Efforts
Kendall's Taub	Hepatitis Awareness	Correlation Coefficient	1.000	.164*
		Sig. (2-tailed)	.	.047
		N	120	120
	Family efforts	Correlation Coefficient	.164*	1.000
		Sig. (2-tailed)	.047	.
		N	120	120

*. Correlation is significant at the 0.05 level (2-tailed).

Table 10 indicates that there is a positive significant correlation between the attitude of undergraduate students towards their family efforts to make them aware of contagious diseases and the level of hepatitis awareness among students. In other words, the more positive attitude they have about family efforts on educating them about contagious diseases, the greater the level of hepatitis awareness.

CONCLUSIONS.

This study aimed to discover the level of knowledge and awareness about contagious diseases (HIV and Hepatitis) among undergraduate students at Near East University in Northern Cyprus.

According to the results, the majority of Near East University students have a high level of awareness about the HIV virus. Therefore, hypothesis one is approved. The result is similar to another study which found that the majority of high school students (about 91%) had some knowledge about sexual transmitted diseases, including HIV (Kaptanoglu et al., 2013). It seems that Near East University has provided an acceptable environment for both college and university students in order to increase their knowledge and shape their attitudes towards the HIV virus. However, the majority of undergraduate students do not have sufficient awareness about the Hepatitis virus. Hence, hypothesis two is rejected.

The result of this part is similar to another study which found that the general knowledge about AIDS and hepatitis B among students is not satisfactory at the University of Kassala in Sudan. However, they were more aware about AIDS than Hepatitis (Khalid et al., 2013). Another study by Crutzen and Gortiz (2011) investigated the public awareness and practical knowledge about Hepatitis in the Netherlands and Germany and showed that regardless of the high awareness of the virus, neither country had sufficient knowledge in terms of the mode of transmission, consequences, and prevention methods. This may be due to the increasing number of students from third countries in which insufficient information about contagious diseases is provided to educate teenagers and young people. A significant number of Near East University students prefer to ask related questions about HIV and Hepatitis to their family members. In other words, according to the behaviorism approach, students can be considered as learners who may obtain information from external stimuli (in this study, family environment), learn new attitudes regardless of any need to consider internal mental states or consciousness.

Family members have an important role in the maintenance of health in all societies, as does Near East University in the case of students. The majority of Near East University students approve of university's efforts to educate them about HIV and Hepatitis diseases. Thus, hypothesis three is approved. A large number of students claimed that they had a positive or neutral attitude towards the role of peers/friends/classmates in increasing the awareness about contagious diseases. According to this result, hypothesis four is approved.

Near East University students have faith in the efforts of their family in order to inform them about contagious diseases. Therefore, the fifth hypothesis is also approved. However, the study did not support the sixth hypothesis, which claimed that Near East University students have a positive attitude towards in the role of the media in educating them about contagious diseases.

The learning process among Near East University students does not seem to be based on individual experience or discovering by means of traditional or digital media. Therefore, ICT tools might not be effective ways of accessing related information or discussing about HIV and Hepatitis viruses for Near East University undergraduate students.

No significant correlation was found between HIV awareness and students' attitude toward any specific learning environment, although a positive significant correlation was discovered between the level of awareness of Hepatitis and attitudes towards family efforts to educate students about contagious diseases. Thus, focusing on learning practices among family members of Near East University students may be considered in order to make them more aware of Hepatitis prevention and control and the outcome of educations may be examined after a specific period of time, since learning seems to be the imposition of knowledge from outside on individuals' behavior in the case of Near East University students. On the other hand, when it comes to the role of the education systems of universities in increasing the level of knowledge of students (especially new students), helping them to develop related attitudes, values and beliefs towards healthy choices should be mentioned. Such practices can be built on students' basic knowledge about certain diseases such as Hepatitis and HIV in Near East University, using several different approaches. This may include creating new tools and educational materials, discussing relevant wellness and disease prevention literature, encouraging students to participate actively in related seminars on contagious diseases, as well as marketing wellness and disease prevention services, and monitoring the real outcomes of those practices on the level of students' knowledge periodically.

In regard to the important role of education for responding to the challenges of implementing an effective program in order to raise the awareness about HIV and AIDS, the United Nations Educational, Scientific and Cultural Organization has suggested various plans for training content in order to ensure the quality of education: providing continuous training for delivering effective

learning programs; providing secure and protective learning environments which may include a nurturing workplace for teachers, making a link between related communities in order to play an appropriate role in academic centers' care and support particularly for vulnerable groups; maintaining the impact of contagious diseases, particularly among teaching staff; and finally, developing suitable strategic partnerships with other sectors. However, even after applying all strategic and plans in an appropriate education system in Near East University, evaluating the policies and future process needs to be considered a priority for the system and research is necessary to understand related issues, such as the influence of education on students' healthy behaviors about Hepatitis, since they have a positive attitude towards university efforts for informing students about contagious diseases. Therefore, bearing that in mind, authorities can utilize this potential capacity in order to resolve the knowledge deficiencies in regard to the Hepatitis virus.

The main limitation of the study was the lack of knowledge of English among some of the Turkish participants. Moreover, due to time constraints, the sample taken for the study was only 120. Another limitation was related to obtaining permission for distributing the questionnaire. According to Near East University rules, researchers must obtain ethical permission, which could take up to one month.

Future studies.

Future studies may focus on the knowledge and attitudes of students about sexually transmitted diseases. Further studies also might determine the awareness of Cyprus citizens about chronic diseases and the best practices available on the island to increase the level of knowledge of citizens to deal with chronic diseases. In addition, previous lessons, present knowledge, and future opportunities and real practices on increasing the awareness of transmitted diseases among high school students in both North Cyprus and the republic of Cyprus could be a future research area.

BIBLIOGRAPHIC REFERENCES.

1. Accelerating Work To Overcome The Global Impact Of Neglected Tropical Dıseases. (2011). Retrieved from http://www.who.int/neglected_diseases/NTD_RoadMap_2012_Fullversion.pdf
2. Coleman, O. (2010). The Role of Community Leaders: Finding Solutions to the HIV/AIDS Epidemic. Lulu publications. Retrieved from: https://books.google.com.cy/books?id=9zsKCgAAQBAJ&dq=role+of+peers+in+disease+awareness&source=gbs_navlinks_s
3. Crutzen, R., & Goritz, A.S. (2011). Public awareness and practical knowledge regarding Hepatitis A, B, and C: A two-country survey. Journal of Infection and Public Health. Volume 5 (2), pp 195-198.
4. Drazic, Y. Lewis, R. & Cowie, B. (2017). Viral hepatitis in the media: Potential negative effects of poor reporting. James Cook University. Retrieved from: https://www.eiseverywhere.com/file_uploads/b0d29a4813542ae3996e5776cae26e85_YvonneDrazic-40.pdf
5. EMU Students Walk to Raise Awareness for World AIDS Day. (2017). Eastern Mediterranean University. Retrieved from: https://www.emu.edu.tr/en/news/news/emu-students-walk-to-raise-awareness-for-world-aids-day/1206/pid/2356
6. Gurney, M. 1998. Personal and social education: Pack 5. Nelson Thornes Publications.
7. Holsapple, C. (2013). Handbook on knowledge management 2: Knowledge Directions. Springer Publications.
8. Kaptanoglu, A., Suer, K., Diktas, D., & Hincal, E. (2013). Knowledge, attitudes and behaviour towards sexually transmitted diseases in Turkish Cypriot adolescents. Central Europe Journal of Public Health. Volume 21(1), pp 54-58.

9. Khalid, F. A., Eltayeb, A.A., & Elbadawi, N. (2013). Awareness and Knowledge of Hepatitis B and HIV/AIDS, Among the University of Kassala Students, Sudan. Journal of AIDS & Clinical Research. Volume 4 (2). Retrieved from: https://www.omicsonline.org/awareness-and-knowledge-of-hepatitis-b-and-hiv-aids-among-the-university-of-kassala-students-sudan-2155-6113.1000194.php?aid=11667
10. Klement, M., Dostal, J., & Bartek, K. (2017). Perception and Possibilities of ICT Tools in the Education from the Teachers´ Perspective. Univerzita Palackého v Olomouci Publications.
11. Kouta, C. (2013). Knowledge, attitudes and perceptions of immigrants from third countries in Cyprus, on HIV/AIDS and sexual and reproductive health. The implication of nursing ethics to healthcare. Retrieved from: https://hephaestus.nup.ac.cy/bitstream/handle/11728/10193/Knowledge-%20Attitudes.pdf?sequence=1
12. Lazorenko, B. (2004). EMPOWERING YOUNG PEOPLE TO PREVENT HIV/AIDS IN UKRAINE. UNESCO. Institute for Education. Retrieved from: http://www.unesco.org/education/uie/pdf/Lazorenko.pdf
13. Mayor, A.M., Fernandez, D., Colon, H., Thomas, J., Miranda, C., &Hunter-Mellado, R.F. (2013). Hepatitis-C multimedia prevention program in poor Hispanic HIV-infected injecting drug users: six months after intervention. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/24241258
14. Munkvold, R., and Kolas, L. (2015). ECGBL2015-9th European Conference on Games Based Learning: ECGBL2015. Academic Conferences and publishing limited.
15. Parnell, E., Scragg, R., Wilson, N., Schaaf, D., & Fitzgerald E. (2003). NZ Food NZ Children: Key results of the 2002 National Children's Nutrition Survey. Wellington Publishers
16. Rea, L. M. & Parker, R. A. (2005). Designing and conducting survey research: A comprehensive guide. San Francisco: Jossey-Bass.

17. Shah, V. (2013). Fighting HIV/AIDS: The Greatest Epidemic in Modern History. Retrieved from www.who.int/hiv/mediacentre/hiv_economics.pdf

18. Trepo, C. (2013). A brief history of hepatitis milestones. Journal of Liver International. Volume 34. Issue 1. Retrieved from http://onlinelibrary.wiley.com/doi/10.1111/liv.12409/pdf

19. Tummons, J. (2010). Becoming a Professional Tutor in the Lifelong Learning Sector. London: Learning Matters Publisher.

20. Ugarte, W.J., Hogberg, H., Valladares, E., & Essen, B. (2012). Assessing knowledge, attitudes, and behaviors related to HIV and AIDS in Nicaragua: A community-level perspective. Journal of Sexual & Reproductive Healthcare. Volume 4. Issue 1. PP 37-44

21. Woolf, B., & Arroyo, I., Zualkernan, I. (2011). Education Technology for the Developing World. Retrieved from 10.1109/GHTC.2011.69

DATA OF THE AUTHORS.

1. Azadeh Ghafourian Alizadeh Tabrizi. PhD student of Innovation and Knowledge Management, Near East University, Cyprus. Email: 20165424@std.neu.edu.tr

2. Mustafa Sagsan. Professor of Management and Organization Science, Near East University, Cyprus, Professor in Management and Director of Graduate School of Social Sciences. Email: mustafa.sagsan@neu.edu.tr

RECIBIDO: 6 de abril del 2019. **APROBADO:** 19 de abril del 2019.