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Level of Health Awareness among Administrative Staff at Derna College of Medical Technology

Hafed Idris Zaatout ¹*, Manal Saad Bouhlala ², Isra Abdul-Wahab Zaatout ³, Aisha Abdul- Wanees Abdul-Atti ⁴

¹ 1 Assistant Professor at Public Health Department, College of Medical Technology, Derna,

Libya² Student at Public Health Department, College of Medical Technology, Derna, Libya

³ Student at Public Health Department, College of Medical Technology, Derna, Libya

⁴ Student at Public Health Department, College of Medical Technology, Derna, Libya

*Corresponding author: <u>hiazaatout@gmail.com.</u>

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Abstract:

Health and education are two interconnected components that help learners understand health phenomena and explore the causes of diseases and preventive measures. The current study aimed to determine the level of health awareness among administrative staff at Derna College of Medical Technology, in Libya, as well as to identify sources of health information. The study design was cross-sectional. In December 2024, information was collected using a self-administered questionnaire. Thirty employees were randomly selected to form the sample. Participants in the study sample were asked to express their responses to 55 statements distributed across five domains using a three-point Likert scale after completing their initial data. After statistical analysis of the data, the study results showed that the level of health awareness among college administrators is low and that awareness varies by gender. According to the study results, the actual transformation of health-related knowledge, facts, and experiences by college administrators into behavioral patterns that impact their entire lifestyle is known as health awareness. Therefore, one of the most important ways to raise their health awareness is to provide them with ongoing guidance and assistance.

Keywords: Awareness Level, Health Information, Administrative Staff, Derna College of Medical Technology.

Introduction

People are able to enjoy the best possible health, which is regarded as one of their fundamental rights, by striving to safeguard and care for them both physically and mentally, attending to their many needs and requirements, and assisting them in achieving holistic and integrated progress. Since everyone aspires to attain health education first, it is the main objective of education. It is a technological procedure with foundations and pedagogical ideas. It starts early and lasts throughout life, aiming to give people a set of knowledge and skills through suitable teaching techniques in order to impact their behavior, attitudes, and knowledge while also forming good habits that support healthy growth. Additionally, it is an educational process that raises health awareness by transforming people's knowledge, habits, behaviors, and attitudes to other kinds of knowledge, behaviors, and attitudes that help them prevent disease, maintain their health, and solve health issues (Kammash, 2015). One of the main goals of educational institutions is to promote people's health, which is one of their most valuable possessions. As a result, protecting it is the duty of all societal institutions, particularly in light of the health issues and problems that societies are currently facing, which call for effective measures to limit its spread in order to prevent endangering the lives of countless others (Al-Shalhoub, 2013). This illustrates that education's function goes beyond developing curricula, learning environments, and instructional techniques. The implementation of various programs and activities aimed at increasing awareness of health issues, providing a healthy environment, and providing health care through medical examinations and awareness campaigns also entails emphasizing behaviors related to

maintaining public health (Qteishat et al., 2019). Lack of time and lack of health awareness are two major external variables that negatively impact body health, according to a 2011 study by the Journal of Sports and Medical Sciences that looked at the association between the growth of static life and body health in the UK (Fuqaha, 2020). The concept of health education and awareness refers to educating and enlightening individuals in order to influence their behavior and habits, particularly during a community illness outbreak. Instilling social behaviors that support health and its advancement like consistent exercise, a healthy diet, and suitable behavior is also crucial (Mursi, 2005). As with the ordinary educational process at any academic level, this topic requires more attention because the development of a significant aspect of a person's personality is closely related to the achievement of raising their degree of health awareness (Harb, 2019). Education and health awareness may assist in improving people's general health, which may lead to higher productivity and fewer medical expenditures, especially when eating well and playing sports are strongly correlated with maintaining good health. Additionally, directing individuals to information that could help them assess their present health status is crucial (Haddad, 2000). Scientific research indicates that being well educated does not necessarily translate into being concerned about one's health. Thus, from a practical standpoint, playing sports can improve health, notably by increasing the efficiency of the circulatory and respiratory systems, which directly control other bodily systems, especially the muscle system (Al-Marassi, 2010).

Material and Methods

Participants: the original study population consisted of administrators and administrator assistants. As for the study sample, it was selected using a stratified random method, where (30) questionnaires were distributed, and the study response rate was 100%. To produce as accurate results as possible, we diversified the study sample regarding age groups, gender, and academic qualifications.

Data Collection: After acquiring the college permission, the questionnaire administrated was during daily working hours of the 2024-2025 academic years. The participants received written instruction that specified the purpose of the study and explained the procedure followed while responding to the questions. In particular, the participants were told that there were no rights or wrong response.

Instrument: the researchers developed a tool for measuring the level of health awareness after reviewing the theoretical literature and other related studies as well as benefiting from the scale designed by Abd Al-Haqq & Others, 2012. The tool of the study consisted of three sections. The first section of the questionnaire includes the personal data of the study sample members, as this part contains data about age, gender, and educational qualification. The second section of the questionnaire includes data on health awareness and contains 55 statements divided into 5 domains as follows:

- Domain 1: Food Health (16 statements)
- Domain 2: Infectious Diseases (7 statements)
- Domain 3: Environmental Health (12 statements)
- Domain 4: Individual Health (12 statements)
- Domain 5: Drugs and Smoking: (8 statements)

To interpret the response to the research tool and to know the level of health awareness among college administrators. The arithmetic averages of the statements were adopted and arranged according to the following criterion:

- Averages from (1) to (1.80) Very Low
- Averages from (1.81) to (2.60) Low
- Averages from (2.61) to (3.40) Medium
- Averages from (3.41) to (4.20) High
- Averages from (4.21) to (5.00) Very High

The third section of the questionnaire includes the sources from which the study population obtains health information. After verifying the validity of the study tool, which is the prepared questionnaire, it was distributed to the planned study sample individuals. A three-point Likert scale was used. Each response is represented numerically as follows: agree (3), neutral (2), and disagree (1). The data were compiled into tables.

Study Hypotheses: the study includes the following scientific hypotheses:

- First hypothesis: the level of health awareness in its five fields among the college administrative staff is high.
- Second hypothesis: there are differences in the level of health awareness among the college administrative staff attributed to the gender variable.

Data Analysis: for accurate results as much as possible, the statistical program used was SPSS to implement the required data analyses. To achieve the objectives of the study and to verify their hypotheses, the following statistical methods have been used:

- Frequency distribution of answers and percentages.
- Arithmetic Mean
- Standard Deviation
- t-test

Results and discussion

1. Demographic Analysis:

Variables	Frequency	Percentage %
Gender		
Male	16	53
Female	14	47
Age (Years)		
15 - 24	0	0
25 - 34	5	17
35 - 44	7	23
45 - 54	14	47
≥ 55	4	13
Level of Education		
Primary Level	0	0
Preparatory Level	3	10
Secondary Level	5	17
Intermediate Diploma	4	13
Higher Diploma	8	27
Graduate	9	30
Postgraduate	1	3

Table 1.1: Respondents Socio-demographic Characteristics: n=30

Table 1.1 indicates that 53% of the respondents were males and 47% were females. As for the age distribution, 5 (17%) of the respondents, fell in the 25–34 age brackets. 7 (23%) and 14 (47%), respectively, fell in the 35–44 and 45–54 age brackets. The remaining 4 (13%) fell in the 55-year-old and above age bracket. Consequently, it can be inferred that the majority of the respondents are below the age of 45. There were administrators in the research sample who were literate and had varying degrees of schooling. Consequently, the greatest levels of education held by 1 (3%) and 9 (30%) of the respondents were a postgraduate degree and a first degree, respectively. Of them, 4 (13%) and 8 (27%) had intermediate diplomas and higher diplomas, respectively. 3 (10%) and 5 (17%) of the respondents were at a preparatory and secondary level, respectively.

2. Results of the first hypothesis test:

Table 2.1: the level of health awareness for the domain healthy nutrition:	n=30
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SN.	Statements	x	±SD	Rank	Awareness Level
1	Malnutrition causes weight loss.	2.62	0.56	6	Medium
2	Regular exercise helps you lose weight.	3.12	0.66	3	Medium
3	Vegetables such as cauliflower reduce the risk of gastrointestinal cancer.	1.20	0.88	14	Very low
4	Vitamin D deficiency leads to rickets.	2.58	0.71	7	Low
5	Vitamin B1 deficiency causes neuritis.	1.12	0.86	16	Very low
6	Atherosclerosis is caused by excess fat.	2.64	0.67	5	Medium
7	Eating too many sweets leads to obesity.	3.42	0.43	1	High
8	Drinking plenty of water keeps your skin fresh.	2.42	0.67	8	Low
9	Some fruits, vegetables, and grains are sources of dietary antioxidants that help fight disease and aging.	1.18	0.91	15	Very low
10	Being overweight causes back pain and hardening of the arteries.	1.92	0.78	11	Low
11	Vitamin B12 deficiency in food leads to anemia.	1.55	0.94	12	Very low
12	Canned foods contain harmful preservatives.	2.71	0.69	4	Medium
13	Carbohydrates are an important source of energy.	2.22	0.90	10	Low
14	The function of protein foods is to build cells and form enzymes, hormones and antibodies.	1.23	0.89	13	Very low
15	Protein is essential for building muscles.	3.20	0.72	2	Medium
16	16 Green tea helps stimulate metabolism, protects against strokes and helps calm the nerves		0.58	9	Low
	Overall Score	2.22	0.74	-	Low

Table 2.1 shows that the level of health awareness among college administrative staff was high on statement (7), while it was medium on statements (1, 2, 6, 12, & 15). The statements (4, 8, 10, 13, & 16) obtained a low level. Meanwhile, statements (3, 5, 9, 11, & 14) ranked last with a very low level. The overall level of health awareness among college administrative staff in the domain of healthy nutrition was low, with a mean equal to (2.22) and a standard deviation of (0.74).

SN.	Statements	X	±SD	Rank	Awareness Level
1	Contaminated water is a major vector for the transmission of bacterial diseases such as cholera, conjunctivitis, otitis media, and typhoid.	2.63	0.86	5	Medium
2	Some infectious parasitic diseases such as schistosomiasis and dysentery are transmitted through water.	2.13	0.88	6	Low
3	Typhoid is a disease that can be prevented by vaccination.	3.83	0.44	1	High
4	Air is one of the means of transmitting syphilis and gonorrhoea	1,77	0.94	7	Very Low
5	Influenza is a contagious disease that is transmitted by using the patient's tools.	3.23	0.69	4	Medium
6	Symptoms of cholera include vomiting and watery diarrhea without colic.	3.70	0.59	2	High
7	Trachoma is a disease that affects the eye.	342	0.49	3	High
	Overall Score	2.96	0.70	-	Medium

Table 2.2: the level of health awareness for the domain infectious diseases: n=30

Table 2.2 shows that the level of health awareness among college administrative staff was high in statements (3, 6, & 7), while it was medium in statements (1& 5). Statement (2) received a low level. Meanwhile, statement (4) ranked last with a very low level. The overall level of health awareness among college administrative staff in the domain of infectious diseases was medium, with a mean of (2.96) and a standard deviation of (0.70).

 Table 2.3: the level of health awareness for the domain environmental health:
 n=30

SN.	Statements	X	±SD	Rank	Awareness Level
1	Appropriate means must be found to dispose of waste without harming the environment.	2.66	0.76	7	Medium
2	Insects and rodents must be controlled, as they are carriers of infection.	3.68	0.57	2	High
3	Using oil lamps instead of electric lamps in the event of a power outage does not affect environmental pollution.	1.89	0.92	9	Low
4	Food must be stored properly.	3.55	0.56	3	High
5	A healthy home must have proper ventilation and lighting and be away from sources of disturbance and noise.	4.13	0.55	1	High
6	Cars must not be operated in garages for long periods.	3.43	0.44	4	High
7	Dust, unpleasant odours and toxic gases must be prevented.	3.11	0.68	5	Medium
8	Taking care of water sterilization is unnecessary.	1.98	0.66	8	Low
9	It is preferable to dispose of household waste by burning it.	1.77	0.95	11	Very low
10	Use insulating materials in building walls to reduce noise.	2.98	0.58	6	Medium
11	1 It is preferable to throw materials resulting from industrial waste into the water to get rid of them.		0.79	10	Very low
12	It is preferable to bury waste near residential areas.	1.71	0.87	12	Very low
	Overall Score	2.73	0.69	-	Medium

Table 2.3 shows that the level of health awareness among college administrative staff was high in statements (2, 4, 5, & 6), while it was medium in statements (1, 7, & 10). Statements (3 & 8) received a low level. Meanwhile, statements (9, 11, & 12) ranked last with a very low level. The overall level of health awareness among the staff in the domain of environmental health was medium, with a mean of (2.73) and a standard deviation of (0.69).

SN.	Statements	X	±SD	Rank	Awareness Level
1	Tight clothing should be avoided.	3.41	0.53	2	High
2	Morning exercise is essential to stimulate blood circulation.	2.43	0.81	9	Low
3	The most influential factor in tooth decay is fluoride deficiency.	2.56	0.71	6	Low
4	Constant care for body hygiene is essential.	3.34	0.59	3	Medium
5	Alcohol is used to treat minor wounds.	3.30	0.55	4	Medium
6	A blood test is essential for those wishing to get married.	2.54	0.76	7	Low
7	Early pregnancy before 18 years increases the health risks of the mother and child.	1.76	0.93	11	Very low
8	Mental health care is no less important than physical health care.	1.85	0.90	10	Low
9	9 The most common cancers in children are blood, brain and bone cancer.		0.82	8	Low
10	Inhaling polluted air reduces the brain's oxygen supply.	3.55	0.54	1	High
11	11 See a psychiatrist when feeling symptoms of mental illness.		0.93	12	Very low
12	Hard work or studying when sick reduces the effectiveness of the brain.	3.16	0.93	5	Medium
	Overall Score	2.67	0.75	-	Medium

Table 2.4: the level of health awareness for the domain personal health:n=30

Table 2.4 shows that the level of health awareness among college administrative staff was high in statements (1 & 10), while it was medium in statements (4, 5, & 12). Statements (2, 3, 6, 8, & 9) received a low level. Meanwhile, statements (7 & 11) ranked last with a very low level. The overall level of health awareness among the staff in the domain of personal health was medium, with a mean of (2.67) and a standard deviation of (0.75).

Table 2.5: the level of health awareness for the domain drugs & smoking: n=30

SN.	Statements	X	±SD	Rank	Awareness Level
1	Smoking causes shrinkage of brain cells and may lead to Alzheimer's disease.	1.73	0.93	5	Very low
2	Smoking addiction leads to non-healing of wounds.	1.43	0.89	7	Very low
3	Addiction is the condition that results from taking a drug and creates the psychological drive and urgent desire to repeat its use.		0.64	4	Low
4	Drug use leads to liver damage.	2.82	0.61	1	Medium
5	Drugs lead to the flow of toxins into the bloodstream and damage to the central nervous system.	2.61	0.64	2	Medium
6	Drugs are absorbed by the intestines and are converted		0.93	8	Very low
7	Smoking causes premature wrinkles.	2.54	0.61	3	low
8	A narcotic substance is any raw or prepared substance that is a stimulant, analgesic or hallucinogen if used for non-medical purposes.	1.55	0.87	6	Very low
	Overall Score	2.00	0.77	-	Low

Table 2.5 shows that the level of health awareness among college administrative staff was medium in statements (4 & 5). Statements (3 & 7) received a low level. Meanwhile, statements (1, 2 6, & 8) ranked last with a very low level. The overall level of health awareness among the staff in the domain of drugs & smoking was low, with a mean of (2.00) and a standard deviation of (0.77).

SN.	Statements	X	±SD	Rank	Awareness Level
1	Healthy Nutrition	2.22	0.74	4	Low
2	Infectious Diseases	2.96	0.70	1	Medium
3	Environmental Health	2.73	0.69	2	Medium
4	Personal Health	2.67	0.75	3	Medium
5	5 Drugs & Smoking		0.77	5	Low
Overall Score of Health Awareness			0.73	-	Low

Table 2.6: Overall level of health awareness: n=30

Table 2.6 shows the level of health awareness for all study domains, which was medium in the domain of infectious diseases, environmental health, and personal health, while the domain of healthy nutrition, and drugs and smoking had a low level. The first domain related to healthy nutrition came with an average score of (2.22) and a standard deviation of (0.75) and a low level of awareness, thus ranking fourth in the levels of health awareness among college administrative staff. As for the second domain related to infectious diseases, it came with an average score of (2.96) and a standard deviation of (0.70) and a medium level of awareness, thus ranking first in the levels of health awareness. While the third domain related to environmental health came with an average score of (2.73) and a standard deviation of (0.69) and a medium level of awareness, thus ranking second in the levels of health awareness. The fourth domain, which is personal health, came with an average score of (2.67) and a standard deviation of (0.75) and a medium level of awareness, thus ranking second in the levels of health awareness. Finally, the fourth domain related to drugs and smoking obtained an average score of (2.00) and a standard deviation of (0.77) and a low level of awareness, thus coming in fifth place in the levels of health awareness. The overall score for health awareness was low, which reflects the failure to meet the first hypothesis of this study.

By examining the table 2.6 we conclude that the level of health awareness among college administrative staff was low. This result may be attributed to the fact that health authorities offer optional health education courses at infrequent intervals. This study provided college administrative staff with information about proper health practices; therefore, they are health literate, but at the same time, they are not health conscious enough to utilize the information provided about healthy behavioral practices. The lowest level of health awareness was in the field of "drugs and smoking." This is due to the lack of interest in health education at an early age, both at the family and school levels, and the basic aspects of curricula in developing health awareness. Meanwhile, the domain of infectious diseases appears to have the highest level of health awareness. The results of this study are somewhat consistent with previous studies, especially when health awareness is considered as the transformation of health knowledge, information, and experiences acquired by an individual into behavioral patterns (Al-Hawari, 2018 & Nazi, 2021).

3. Result of the second hypothesis test:

Domains	Gend	er	x	±SD	Т	p-value	H0
Healthy Nutrition	Male	16	8.76	2.17	0.93	0.05	Rejected
Healthy Nutrition	Female	14	7.95	1.75	0.93	0.05	
Infectious Diseases	Male	16	4.67	1.08	2.14	0.02	Assented
Infectious Diseases	Female	14	4.03	0.81	2.14	0.03	Accepted
Environmental	Male	16	6.07	1.37	1.42	0.15	Accepted
Health	Female	14	5.44	0.88		0.15	
Personal Health	Male	16	5.73	1.54	0.04	0.96	Rejected
Personal Health	Female	14	5.46	0.84	0.04	0.96	
Davas & Smolting	Male	16	4.62	1.23	3.71	0.00	Accepted
Drugs & Smoking	Female	14	5.60	0.87	5.71	0.00	
Overall Score of	Male	16	63.30	9.00	1.81	0.07	
Health Awareness	Female	14	57.13	16.91	1.01	0.07	Accepted

Table 3.1: Differences in the level of health awareness based on gender variable: n=30

According to table 3.1, there were no statistically significant differences in the level of health awareness among college administrative staff that could be attributed to the gender variable in the two domains of personal health and healthy nutrition because the calculated T value was lower than its tabular value, which is equal to 0.95. There were statistically significant differences in college administrators' health awareness levels that could be attributed to the gender variable in the domains of infectious diseases, environmental health, and drugs and smoking. In the meantime, the gender variable was responsible for statistically significant differences in the overall score for the level of health awareness among college administrative staff in favor of males. In such a type of study, it is difficult for researchers to compare the results obtained with previous studies, especially when the target group is a heterogeneous mix that includes individuals of different genders, ages, educational levels, and scientific specializations, in addition to differences in cultural backgrounds and beliefs. However, some studies have shown gender differences in health awareness levels, and these differences are influenced by the domain of comparison (Iqbal, & Ahmad, 2020 - Al Arabi et al., 2019).

4. Access to health information:

SN.	Source	x	±SD	Rank
1	Media.	2.98	0.74	1
2	Subjects you studied during your educational career.	1.78	0.66	7
3	Friends.	1.65	0.69	8
4	Cultural activities.	1.88	0.75	5
5	Self-study.	2.87	0.78	2
6	Sports and health programs.	1.83	0.71	6
7	Training courses.	1.54	0.70	9
8	Continuous visits to health centres.	2.12	0.74	4
9	Parents	2.42	0.69	3

Table 4.1: Sources of health information: n=30

Table 4.1 shows the extent to which respondents accessed health information. The media was the primary source of health information, followed by self-study and parents. Regular visits to health centres ranked fourth as a source of health information, followed by cultural activities, and sports programs. The least common sources of health information were training courses, friends, and subjects studied during their educational careers. The results of this study are somewhat consistent with previous studies (Al-Qadoumi, 2005 & Senthilkumar, 2017).

Conclusion

A sample of thirty administrative staff members from the College of Medical Technology, Derna, participated in the field study. A questionnaire on the level of health awareness and how to find health information served as the application's measurement tool. Following statistical analysis of the data, it was shown that college administrative staff members had a low level of health awareness. The study also demonstrated that the gender variable was responsible for statistically significant differences in the overall score of the level of health awareness among the college's administrative staff in favor of males, as well as statistically significant differences in the level of health awareness professionals can select the target group by using such a survey study to assess their level of health awareness and spot cognitive impairments.

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