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ASSESSMENT OF KNOWLEDGE AND AWARENESS OF ESOPHAGUS CANCER AMONG SCIENCE STUDENTS IN UNIVERSITY OF BALOCHISTAN, QUETTA.

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Abstract

Aims & Objectives*: The aims and objectives of this study was too aware and give knowledge to healthy university student from the risk factor of esophagus cancer because the risk factor of the esophagus cancer is very common include smoking, drinking alcohol, having a low diet in fruits and vegetable, obesity, poor oral hygiene, canned food, used of food at high temperature UV (ultra violet) rays.* ***Methodology****: A cross-sectional study was conducted in university of Baluchistan (Quetta) among science students. The duration of study was March to September 2016. The study technique for sampling was stratified convenient technique. The tool for study was Questionnaire. The total number of the sample size for the study was 440 among which 137 was discarded due to respondents poor knowledge about esophagus cancer.* ***Results:*** *majority of the students (62.7%) have age range between 21-25 years. Majority of the students (55.1%) were males. Majority of the students (42.2%) were of first year students. Majority of the students (39.9%) know that Esophagus cancer is more common in males than females. Majority of the students (56.4%) know that Excessive intake of hot drinks is a risk factor for esophagus cancer. Majority of the students (40.3%) know that low intake of fruits and vegetable are risk factor for esophagus cancer. Majority of the students (49.5%) know that used of canned food is risk factors for esophagus cancer. majority of the students (59.1) have poor knowledge about esophagus cancer.* ***Conclusions:*** *Knowledge and Awareness of esophagus cancer, its risk factor, sign & symptoms, diagnosis, treatment, complications, and prevention was very low among science students in university of Baluchistan, (Quetta).*

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INTRODUCTION:

Esophagus cancer is a disease in which malignant (cancer) cells appear in the tissues of the esophagus [1]. Esophageal cancer (EC) is the 9th most common malignancy worldwide and third amongst the gastrointestinal malignancies [2]. Golestan Province in Iran had the maximum rate of esophageal squamous cell carcinoma in the world [3]. Mostly esophageal cancers do not cause any symptoms until they have reached an progressive stage [4]. Symptoms include Dysphagia, Weight loss, Chest pain, heartburn Coughing [5] About 90% of the cases were of squamous cell carcinoma, Adenocarcinoma appear to be rising in the west [2]. The risk factor of Squamous cell carcinoma includes poor socio economic status, Consumption of pickled food, a diet poor in fruits and vegetable, Consumption of herbal teas, human papillomaviruses, Combustion product and fossil fuels, Alcohol and smoking, medical condition includes (alchasia, celiac disease) [6, 7]. The risk factor of adenocarcinoma includes race, obesity, use of esophageal sphincter relaxing agents, smoking and alcohol, medical condition include gastro esophageal reflux and Barrett's esophagus [6]. Esophagus cancers are usually found because of signs or symptoms a person is having. If esophagus cancer is supposed, exams and tests will be needed to confirm the diagnosis. [8]. Medical history and physical examination, Imaging history, Barium swallow, C T scan, M R I scan, P E T scan, Endoscopy, Bronchoscopy, Biopsy are used for diagnosis of esophagus cancer [8]. Esophageal cancer, when detected at an early stage, has a very good chance of being removed by surgery or radiotherapy [9]. A key drug for combined chemotherapy is cisplatin and 5-fluorouracil [10]. Fruits and vegetable such as carrots, green vegetables & tomatoes reduces the risk of esophagus cancer [11]. Increases in physical activity, and reduction of alcohol consumption and smoking decrease the risk of esophagus cancer [12]. Moldy food, pickled vegetables should be avoided due to presence of carcinogenic properties [13]. It is 3rd common tumor in male and 4th common in female. More common in Baluchistan than in Afghanistan. [2].

METHDOLOGY:

STUDY DESIGN, SETTING AND DURATION

The study was cross-sectional conducted in Quetta in University of Baluchistan among science students in science departments including Pharmacy, Chemistry, Zoology, Botany. Microbiology, Physics, DPT (doctor of physiotherapy), BEMS (bachelors in Eastern medicine and surgery), Mathematics & Statistics Department. The duration of study was from March 2016 to September 2016.

SAMPLE SIZE AND TECHNIQUE

The total number of the sample size for the study was 440. The study technique for sampling was stratified convenient technique.

STUDY TOOL

The tool for study was Questionnaire. The Questionnaire was developed in English. The Questionnaire was self-developed & the Questionnaire was validated by the supervisor. Questionnaire includes the following Demographic, 20 knowledge Question about esophagus cancer including Term, risk factor, sign &symptoms. Diagnosis, treatment, stages and complication of Esophagus cancer, & Source of information.

SCORING

The cut off value for the scoring was 7 or below 7 was considered as poor knowledge & 8 or above 8 was considered as adequate knowledge.

DATA COLLECTION PROCEDURE

First of all, the science department was selected. Then the Questionnaire was distributed among the respondents. Then presentation was delivered to the respondents by the researcher according to the title. The responses were collected as yes, no and don't know. The average time of interview was between 10-15 minutes.

ETHICAL CONSIDERATION

This study was conducted according to the ethical guidelines for human experimentation. The medical superintendents approved the research and written consent was taken from every participant prior to initiate research [14].

DATA ANALYSIS

The data were computed & analyzed by using the software (IBM SPSS statistics 21) Descriptive analysis was conducted. The result for each Questionnaire was reported, as frequencies & percentage.

RESULTS:

Demographic characteristic:

Demographic result showed in table # 1 show that majority of the respondent (n= 190 (62.7%) have age range between 21-25 years. Majority of the respondent (n= 167(55.1%)

Were males. Majority of the respondent (n= 210 (69.3%) were urban citizen. Majority of the respondent (n=120 (39.6%) were Pashtun students. Majority of the respondent (n=128 (42.2%) were of first year students. Majority of the respondent (n= 89 (29.4%) were pharm D students.

Table 1: Demographics

Description	Frequency	Percentage (%)
Age		
16 – 20 years	109	36.0%
21 – 25 years	190	62.7%
26_30 years	2	.7%
31_35 years	1	.3%
36_40 years	1	.3%
Gender		
Male	167	55.1%
Female	136	44.9%
Locality		
Urban(city)	210	69.3%
Rural(village)	93	30.7%
Ethnicity		
Pashtun	120	39.6%
Baloch	114	37.6%
Persian	6	2.0%
Punjabi	26	8.6%
Urdu	23	7.6%
Others	14	4.6%
Year of study		
Frist year	128	42.2%
Second year	110	36.3%
Third year	20	6.6%
Fourth year	23	7.6%
Fifth year	22	7.3%
Department		
BEMS	19	6.3%
PHARM D	89	29.4%
ZOOLOGY	20	6.6%
BOTANY	18	5.9%
MICROBIOLOGY	25	8.3%
CHEMISTRY	28	9.2%
BIOCHEMISTRY	23	7.6%
STATISTICS	19	6.3%
PHYSICS	20	6.6%
MATH	18	5.9%
DPT	24	7.9%

Knowledge regarding esophagus cancer

As shown in table #2 Majority of the respondent 303(100.0 %) had heard about esophagus cancer. Majority of the respondent 263 (86.8%) know that Esophagus cancer effect the esophagus (food pipe). Majority of the respondent 121(39.9%) know that Esophagus cancer is more common in males than females. Majority of the respondent 171(56.4%) know that Excessive intake of hot drinks is a risk factor for esophagus cancer. Majority of the respondent 256(84.5%) know that Intake of tobacco (e.g.: cigrates, cigar, pipes, naswar etc.) are risk factor for esophagus cancer. Majority of the respondent 122(40.3%) know that low intake of fruits and vegetable are risk factor for esophagus cancer. Majority of the respondent 150(49.5%) know that used of canned food is a risk factor for esophagus cancer. Majority of the respondent 181(59.7%) know that Undergoing radiation treatment for the chest and upper abdomen is a risk factor for esophagus cancer. Majority of the respondent 114(37.6%) know that Obesity is a risk factor for esophagus cancer. Majority of the respondent 162(53.5%) know that Poor oral hygiene is a risk factor for esophagus cancer. Majority of the respondent 142(46.9%) know that Used of food at high temperature such as (grilling, roasting, & frying) is a risk factor for esophagus cancer. Majority of the respondent 142(46.9%) know that Dietary habits such as (not good enough chewing of food, eating hard and highly salted food) is a risk factor for esophagus cancer. Majority of the respondent 162(53.5%) know that in early stage there is no sign and symptom for esophagus cancer. Majority of the respondent 120(39.6%) know that esophagus cancer is diagnosed by Endoscopy. Majority of the respondent 166 (54.8%)Don't know that esophagus

cancer is diagnosed by CT SCAN. Majority of the respondent 171(56.4%) Don't know that esophagus cancer is diagnosed by biopsy. Majority of the respondent 187(61.7%) Don't know that esophagus cancer is diagnosed by Bronchoscopy. Majority of the respondent 148(48.8%) don't know that all of the above option are used to diagnosed the esophagus cancer. Majority of the respondent 191(63.0%) know that esophagus cancer is curable/treatable disease. Majority of the respondent 214(70.6%) know that Chemotherapy and radiotherapy is used to treat esophagus cancer. Majority of the 169(55.8%) respondent know that esophagus cancer is treated by surgery. Majority of the respondent 209(69.0%) know that Treatment of esophagus cancer depend upon stages. Majority of the respondent 117(38.6%) know that anemia (decreased blood count) is a complication of esophagus cancer. Majority of the respondent 134(44.2%) know that alopecia (hair loss) is a complication of esophagus cancer.

Table # 2: Question Response

QUESTION	YES	NO	DON'T KNOW
Have you ever heard about term esophagus cancer?	303(100.0 %)	--	--
Esophagus cancer effect the esophagus (food pipe)	263(86.8%)	21(6.9%)	19(6.3%)
Esophagus cancer is more common in males than females.	121(39.9%)	62(20.5%)	120(39.6%)
Excessive intake of hot drinks is a risk factor for esophagus cancer.	171(56.4%)	68(22.4%)	64(21.1%)
Intake of tobacco (e.g. cigrates, cigar, pipes, naswar etc.) are risk factor for esophagus cancer.	256(84.5%)	28(9.2%)	19(6.3%)
Low intake of fruits and vegetable are risk factor for esophagus cancer.	122(40.3%)	115(38.0%)	66(21.8%)
Used of canned food is a risk factor for esophagus cancer.	150(49.5%)	66(21.8%)	87(28.7%)
Obesity is a risk factor for esophagus cancer.	114(37.6%)	89(29.4%)	100(33.0%)
Undergoing radiation treatment for the chest and upper abdomen is a risk factor for esophagus cancer.	181(59.7%)	59(19.5%)	63(20.8%)
Poor oral hygiene is a risk factor for esophagus cancer.	162(53.5%)	56(18.5%)	85(28.1%)
Used of food at high temperature such as (grilling, roasting, and frying) is a risk factor for esophagus cancer.	142(46.9%)	85(28.1%)	76(25.1%)
Dietary habits such as (not good enough chewing of food, eating hard and highly salted food) are a risk factor for esophagus cancer.	142(46.9%)	82(27.1%)	79(26.1%)
In early stage there is no sign and symptom for esophagus cancer.	162(53.5%)	66(21.8%)	75(24.8%)
Diagnosis Endoscopy CT SCAN Biopsy Bronchoscopy All of The Above	 120(39.6%) 70(23.1%) 65(21.5%) 49(16.2%) 88(29.0%)	 115(38.0%) 166(54.8%) 171(56.4%) 187(61.7%) 148(48.8%)	 68(22.4%) 67(22.1%) 67(22.1%) 67(22.1%) 67(22.1%)
Is esophagus cancer is curable/treatable disease.	191(63.0%)	44(14.5%)	68(22.4%)
Chemotherapy and radiotherapy is used to treat esophagus cancer.	214(70.6%)	45(14.9%)	44(14.5%)
Can esophagus cancer can be treated by surgery.	169(55.8%)	71(23.4%)	63(20.8%)
Treatment of esophagus cancer depend upon stages.	209(69.0%)	26(8.6%)	68(22.4%)
Can anemia be a complication of esophagus cancer.	108(35.6%)	78(25.7%)	117(38.6%)
Can alopecia (hair loss) be a complication of esophagus cancer.	134(44.2%)	61(20.1%)	108(35.6%)

Source of knowledge

Source of knowledge were analyzed in table #3 and shown that (n= 180 49.5%) academic learning is major source of information. In table #3 the second major source of information (n= 88 24.2%) is newspaper/internet.

Table 3: Source of knowledge

Source	frequency	Percentage
Academic learning	180	49.5%
Seminar/workshop	34	9.3%
Family/friends /relatives	62	17.0%
Newspaper/internet	88	24.2%

Knowledge assessment

Score level was analyzed in table # 4 and showed that majority of the respondent (n= 179) (59.1%) have poor knowledge about esophagus cancer.

Table 4: score level

Score level	frequency	Percentage%
Adequate knowledge	124	40.9%
Poor knowledge	179	59.1%

COMPARISION OF MEAN SCORE

Comparison of mean score shown in Table # 5 which shows means comparison significance difference. All of the demographics were significantly associated ($p<0.05$), age ($p=.837$). including gender ($p=0.01$), locality ($p= .032$), ethnicity ($p=.007$), Proff ($p= .002$), department ($p=.001$).

Table 5: COMPARISION OF MEAN SCORE

DESCRIPTION	FREQUENCY	MEAN	STANDARD DEVIATION	P-VALUE
AGE				
16 – 20 years	109	11.52	3.673	0.837
21 – 25 years	190	11.19	3.594	
26_30 years	2	10.00	1.414	
31_35 years	1	9.00	.	
36_40 years	1	10.00	.	
GENDER				
Male	167	10.59	3.147	0.001
Female	136	12.15	3.647	
LOCALITY				
Urban(city)	210	11.58	3.631	0.032
Rural(village)	93	10.65	3.469	
ETHNICITY				
Pashtun	120	11.42	3.261	0.007
Baloch	114	10.63	3.709	
Persian	6	11.00	4.561	
Punjabi	26	13.08	3.393	
Urdu	23	12.43	3.435	
Others	14	10.43	4.569	
PROFF				
Frist year	194	11.05	3.792	0.002
Second year	181	10.85	3.519	
Third year	20	12.30	3.310	
Fourth year	23	11.52	2.983	
Fifth year	22	13.68	2.784	
DEPARTMENT				
BEMS	19	9.37	2.087	0.001
PHARM D	89	11.83	3.266	
ZOOLOGY	20	8.65	2.134	
BOTANY	18	9.94	3.765	
MICROBIOLOGY	25	13.64	4.415	
CHEMISTRY	28	10.39	2.948	
BIOCHEMISTRY	23	10.70	3.535	
STATISTICS	19	11.63	4.310	
PHYSICS	20	13.20	4.708	
MATH	18	10.89	3.787	
DPT	24	11.63	1.861	

DISSCUSION:

The Rational of this study was too aware and give knowledge to healthy student from the risk factor of esophagus cancer because the risk factor of the esophagus cancer is very common include smoking, drinking alcohol, having a low diet in fruits and vegetable, obesity, poor oral hygiene, canned food, used of food at high temperature & UV (ultra violet) rays. In this study there was poor knowledge and awareness about esophagus cancer. same study was conducted in Ireland in which similar response was observed [15]. In this study majority of the respondent know that Intake of tobacco (e.g.: cigrates, cigar, pipes, naswar etc.) is a risk factor for esophagus cancer? Same study was conducted in Jordan among university students in which majority of the respondents agreed that smoking caused esophagus cancer [16].Same study was conducted in Karachi, Pakistan on women attending primary care clinics. Most of the women (84%) reported smoking to have a bad effect on women's health.14% of them reported that smoking can cause some kind of cancer [17]. According to this study majority of the respondent had heard about esophagus cancer. Same study was conducted in a tertiary care hospital in Karachi, (Pakistan). The result study indicated that all respondents had heard about the word cancer but a great majority of the respondents were unaware of its risks [18].According to this study majority of the respondent know that Obesity is a risk factor for esophagus cancer. Same study was conducted

and about 79% of the cases of esophageal adenocarcinoma associate to BMI (body mass index) [19].According to this study majority of the respondent know that Esophagus cancer is more common in males than females. Same study was conducted among student and students were aware that esophagus cancer was more common in male as compared to females due to certain lifestyle factors such as smoking and alcohol consumption [19]. According to this study majority of the respondent know that low intake of fruits and vegetable are risk factor for esophagus cancer same study was conducted which also evaluates that consuming low amounts of fruits and vegetables is a risk factor for esophageal adenocarcinoma [19]. According to this study majority of the respondent know that Dietary habits such as (not good enough chewing of food, eating hard and highly salted food) is a risk factor for esophagus cancer. Same study was conducted in central and eastern Europe which also evaluates while swallowing large pieces of poorly chewed food that may irritate the esophagus and ultimately cause esophagus cancer [20]. According to this study majority of the respondent (46.9%) know that Used of food at high temperature such as (grilling, roasting, & frying) is a risk factor for esophagus cancer .Same study was conducted in eastern Nebraska which estimates that Meats cooked at high temperatures (frying, grilling) and for a long duration contain heterocyclic amines, which contain carcinogenic properties and is associated with esophageal cancer risk [21].

CONCLUSION:

Knowledge and Awareness of esophagus cancer, its risk factor, sign & symptoms, diagnosis, treatment, complications, and prevention was very low among science students in university of Baluchistan, (Quetta).

RECOMMENDATIONS:

After findings of the study conducted in university of Baluchistan, (Quetta) among science students however, knowledge and awareness about esophagus cancer was very low (59.1%). There is a need of health education seminars, workshop and conferences for generating more knowledge and awareness about esophagus cancer in university of Baluchistan, (Quetta). As esophagus cancer is More common in Baluchistan than in Afghanistan. Public health professionals should also transfer messages closely related to the risk factor of esophagus cancer because these risk factor are very common. Major benefit of educating a student about esophagus cancer is that they convey their information to general & illiterate population.

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