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Impact Of The Awareness Of Dental Clinic Among Dental Caries In Adults Patients Attending In The Primary Health Care At Saudi Arabia 2023

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Abstract:

Background*:*
Poor oral health is not an inevitable consequence of and a proactive, multidisciplinary approach to early recognition and treatment of common pathologies increases the likelihood of maintaining good oral health. Some individuals may not have regular access to a dentist, and opportunities to improve oral health may be lost if health professionals fail to appreciate the importance of oral health on overall well-being and quality of life, it is important to note that there is a bi-directional dimension to oral health and chronic diseases, underscoring the value of a multidisciplinary approach to maintaining oral health in adults. The World health organization reports the burden of oral diseases to be less in developing countries including Africa and higher in the developed world. Despite health sector improvement in Saudi Arabia, dental caries has remained among the leading causes of consultation at all levels of the health care delivery pyramid with high numbers in rural communities. The prevalence of dental caries experienced in Saudi Arabia is found to be high but few studies have been conducted assessing the predisposing risk factors, especially in adults. Oral health's association with general health, morbidity, and mortality in adults highlights its importance for healthy. ***Aim of the study:*** *To assessment the impact of the awareness of dental clinic among dental caries in adults patients attending in the Primary health care at Saudi Arabia 2023.* ***Method:*** *cross sectional study conducted at outpatient dental clinics in primary health care center at Saudi Arabia in Sample population consists of Saudi out patients aged 25 <55 years attending. Our total participants were (200).* ***Results:****. Show among the socio-demographic details among the adults patients regarding age majority of the study groups from the 35-44 years were (44.0%) the residence area the majority of the respondents urban w[1]ere (76.0%) regarding having an old father/mother the most of the participants answer No were (82.0%) the education status the majority of the respondents medium were (29.0%).****Conclusion****: The prevalence of dental caries was high in the study population and the multifactorial risk factors associated with its*

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development were found to be poor oral hygiene, frequent consumption of sugary snacks and beverages, gender, and age, recommended further studies to awareness these multifactorial risk factors on a larger scale.

Keywords: *Impact, awareness, dental caries, adults patients, attending, primary health care, Saudi Arabia*

Introduction

Background

The importance of teeth hygiene seems less known by a portion of the general population mainly in rural areas with the influence of their education level and other socioeconomic factors. The oral cavity plays an important role in physiological processes, including digestion, respiration, and speech and it is a key indicator of overall health, wellbeing, and quality of life [1]. The World Health Organization defines oral health as a state of being free from mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum disease, tooth decay, tooth loss), and other diseases and disorders that may limit an individual's capacity in biting, chewing, smiling, speaking, and psychosocial wellbeing [2]. The disease causes tooth decay leading to teeth loss in addition to local, psychological, systemic, and social complications. Some risk factors are known for specific chronic diseases including diet, hygiene, tobacco use, alcohol, and risky behaviors causing casualties and impairments. Some of the food listed to be cariogenic include sugar and chocolate, confectionery, cakes and biscuits, jams and jellies, ice cream, fruit syrup, sugared soft drinks, and flavored /sweetened milk, pastries, fruit pies, puddings, and sugared breakfast cereals [3]

As the human life, in adults are known to retain their teeth for longer. Dental clinicians will see an increase in the number of in adult's patients as the population's life expectancy rises. The dental caries as loss of periodontal attachment is a common risk factor for root surface caries development in adults [4]. Throughout the world, a demographic revolution steps forward. The proportion of in adults people is growing faster than of any other age group. Approximately, 600 million people are in adult's years and this number will double by 2025. By 2050, it will be 2 billion, 80% living in almost all developed and developing countries this poses. [5]. Dental caries is one of the most significant oral health issues and its prevalence has increased notably in the Middle East.[6] In KSA, Al-Ansari showed that there had been a significant increase in the prevalence of caries to approximately 89% in adults and elderly.[7] Another study showed that Saudi females have high rates of caries due to inadequate oral hygiene.[8] Traditionally, dental caries used to be treated by complete surgical removal of the infected and affected carious tooth tissue, followed by final restoration.[9]

Psychotropic promote dental caries development due to their affection for the consumer's behavior. Some classes of pharmaceutical formulations facilitate dental caries development as the effect of the active pharmaceutical ingredient (drugs causing dry mouth like antimuscarinics) or additives in the compounding (high sugar content). The list also comprises drugs that reduce the buckle pHC like inhaled powders and drugs that cause demineralization such as tetracycline's [10]. The current fast-changing lifestyles with more consumption of sugar, inadequate hygiene, and lack of both fluoride and calcium negatively impact oral hygiene all over the world [11] . The authors of this narrative review examined government websites and Dental Health website, and the Healthy People 2030 oral objectives and identified xerostomia, edentulism, caries, periodontitis, and oral cancer as five key topics for the non-dental provider. These conditions are associated with nutritional deficiencies, poorer quality of life, increased risk of disease development and poorer outcomes for cardiovascular disease, diabetes, and other systemic conditions prevalent among adults. [12]

The decision makers and health authorities can hence formulate policies and develop programmers to prevent and control the disease and conduct evaluations regularly. However, the most recent systematic review of caries status in global population was conducted more than a decade ago [13]. Updated information on caries prevention and control in adults patients to facilitate policy planning for the coming decade is needed. [14] almost all developed and developing countries have become aware about the importance of maintaining good health. This poses tremendous challenges to health and social policy planners, particularly because disease patterns will shift concurrently.[15]

Review of literatures

Dental caries was the fourth most expensive disease to treat, in the last decade, untreated caries was prevalent worldwide, affecting 2.4 billion people with the third peak at the age of 70, the situation remains the same after a decade. [16]

In a survey conducted by Moreira et al. [17] in Brazil, most of the dentists had moderate knowledge and attitude towards the adults patients people. A significant relationship between gender and attitude was reported in the study conducted by Bots-VantSpijker et al. in Netherlands and Belgium [18] where women showed a more positive attitude. They argued that higher attitude scores in women could be due to their higher level of empathy and emotions. However, the difference was not significant in study.

Study by al dhubayb reported that the majority of participants reported that they used the G.V. Black classification (46%) or relied on their experience (28%) when diagnosing dental caries. Furthermore, <5% of our study cohort used the ICDAS II criteria when diagnosing lesions. Similarly, reported that dentists in KSA were unable to adequately detect caries using the ICDAS criteria.[19]

Study by Chan et al (2021) showed that untreated caries was still widespread globally in adults patients. The majority of the included studies reported a prevalence of untreated caries of 50% or more. It varied among continents with the highest prevalence in Asia and Africa and the lowest in Australia. The median of the mean number of teeth with untreated caries was 1.55 per older adult around the globe.[20]

A systematic review on the global burden of untreated caries between 1990 and 2010 reported a high caries prevalence worldwide, affecting 2.4 billion people.[21]

Previous studies have shown that people with a low socioeconomic status have poorer oral health status than do those with a higher socioeconomic status and that oral health worsens progressively from higher socioeconomic status to lower socioeconomic status. Socioeconomic status includes educational background, income and residential area and is considered to be one of the strongest determinants of caries in adults patients and elderly.[22] Household income and educational level are significantly associated with periodontitis and edentate status in adults people. Therefore, the literatures suggest that socioeconomic factors are crucial oral health determinants and that inequality in socioeconomic status is an important challenge for public oral health.[23]

Abdelrahim et al. Also reported that the majority of dentists were not well aware of the geriatric dentistry (88.5 and 11.5% had poor and moderate knowledge, respectively). However, in study, the majority of the participants had moderate knowledge and 10.8% reported poor knowledge of geriatric dentistry. This discrepancy can be partly due to the number and type of the questions posed. [24]

Rationale

Compared to dentists, dental hygienists were more attentive to patients with dental caries as they encountered these individuals more often, asked more age-groups, suggested frequent preventive measures, and had higher awareness of the causes and complications of oral dryness. Length of professional experience could improve both the management of patients with oral dryness and awareness of its causes, particularly for dental hygienists. dental caries, periodontal disease, and oral cancer represent five common oral pathologies among adults patients. These conditions are associated with nutritional deficiencies, poorer quality of life, increased risk of disease development and poorer outcomes for

cardiovascular disease, diabetes, and other systemic conditions prevalent among adults' patients. Opportunities to improve oral health may be missed by health professionals who may fail to appreciate the importance of oral health on overall well-being and quality of life.

Aim of the study
To assessment the impact of the awareness of dental clinic among dental caries in adults patients attending in the Primary health care at Saudi Arabia 2023

Specific objective
To assessment the impact of the awareness of dental clinic among dental caries in adults patients attending in the Primary health care at Saudi Arabia 2023

Methodology

Study setting:
This study has been conducted among dental caries in adult's patients attending in the Primary health care at Saudi Arabia 2023

Study Population
The study population consists of elderly patients attending in the Primary health care in Riyadh at Saudi Arabia 25-55 years attending to outpatient attending health care center Saudi Arabia

Study Design
Cross-sectional, analytic study , systematic random sampling technique

Inclusion criteria:
Adult's patients attending PHC aged 52-55 years
Able and willing to participate in the study .
Participants suffer from dental caries.

Exclusion Criteria
Out patients less than 25 years
Not able and refuses to participate in the study.

Sample size:
Using EPI info version 24, the study sample size has been determined based on the following assumptions :
Since there is not an official release, e.g., by the "Central Department of Statistics and Information" in Saudi, of the exact census of Saudi Arabia residents falling within the study's age category, a source population size of the same of has be assumed. (Definitely, the true population of such category is greater , also to be most conservative, the least number needed for a reasonably large sample size that allows generalizability of the study result. Knowingly, sample sizes obtained from source population sizes above are not significantly different).
Accordingly, a sample size (n) would be 200. In order to account for non-response and achieve more generalizable results, the investigator has be increase the sample size up to 200.

Sampling Technique:
Regarding health care center selection, by using simple random sample technique (by using randomizer.org), regarding patients' selection, the total number visiting is 3400 per month and the sample size is 200. The data collection period is 30 days (four weeks minus

weekends). Every day there are nearly 85 patients attending in PHC in both sections (male and female sections). To collect data from sample size, the researcher needs nearly 20 patients per day to collect desired sample size. The researcher has been selecting every 4th patient to cover the sample size during data collection period .The study period extended from November 2023 to January 2023.

Sampling method:
The total number of adults' patients attending primary health care center in one month is 3400. Based on this information sample size was calculated using a website (raosoft.com). The resulted estimated sample size is 200 adults' patients. The confidence interval is 95% and margin of error is 5%. The estimated prevalence used is 50% to calculate maximum sample size.

Data collection method:
Self-administered questionnaire has been given to all participants. Those who have trouble reading or writing the questionnaire, has be filled by the interviewer

Questionnaire:
An Arabic self-administered questionnaire has been used. It consisted of three sections. The first section is on the socio-demographic and presence of chronic disease, and present medication history (e.g., age and education level). The second sections cover ddistribution of basic characteristics of dental caries. The third section addresses of knowledge of respondents relating in dental caries in caries management and responses of participants to dental caries in caries management

Data Collection Technique
The researcher has visit the health care center The researcher has filled the questionnaires through the interview with patients who are attending adults' patients attending health care center met the inclusion criteria after taking their verbal consent. After obtaining necessary approvals, the researcher and one trained nurse used a since all centers work on walk-in basis, i.e., using “systematic random sampling” technique .

Data Entry and Analysis
Data has been collected and coded and then entered to a program with adequate backup. Descriptive statistics, e.g., number, proportions, cumulative proportions, mean and standard deviation, etc. has been displayed, as appropriate. Analytically, a parametric technique, e.g., t-test , has been attempted, as applicable, especially analyzing normally distributed variables. Otherwise, a non-parametric alternative, e.g., Man Whitney U test and ANOVA or χ^2 test of independence, has been used, as necessary. The Statistical Package for Social Sciences (SPSS) software for version-24 will be used for the analysis. All tests has been conducted at level of significance a=0.05; results with p-values<0.05 has been considered “statistically significant ”.

Pilot Study
A pilot study has been done on 10 Saudi patients who meet the study’s eligibility criteria. The pilot study has been mainly help examine both the instrument’s content validity and construct validity issues, alongside with other needed information.

Ethical Considerations
Necessary approval has been the Research Ethics Committee of the PHC, shall be obtained prior to the stud . A written consent has been obtained both from PHC administration. The aim of the study has been explained to them. Feedback about the results has been sent to these organizations .Data has been treated confidentially and has been used only for the purpose of research .

Budget : Self-funded.

Result

Table 1. Distribution of the demographic characteristics of about (n-200)

	N	**%**
Age		
25-34	42	21
35-44	70	44
≥50	88	35
Sex		
Female	94	47
Male	106	53
Residence area		
Rural	48	24
Urban	152	76
Percentage of the patients visited in the last month in the Adult's patients group		
< 15%	68	34
15–30%	88	44
> 30%	44	22
Having an old father/mother		
Yes	36	18
No	164	82
Type of household		
Non-agricultural family	68	34
Agricultural family	132	66
Relationships with their grandparents		
Close relationship	54	27
Not so close	64	32
They are not alive	82	41
Educational level		
Illiterate	54	27
Low	44	22
Medium	58	29
High	44	22
Income		
Low	62	31
Medium	58	29
Medium-high	22	11
High	58	29
Do you smoke		
Yes	74	37
No	126	63

Regarding the distribution of the socio-demographic details among the adults patients regarding age majority of the study groups from the 35-44 years were (44.0%) followed by ≥50 years were (35.0%) but 25-34 years were (21.0%) , regarding the gender many of the respondents were male (53.0 %) while female were (47.0%), regarding the residence area the majority of the respondents urban were (76.0%) while rural were (24.0%), regarding the percentage of the patients visited in the last month in the adult's patients group the most of the participants 15–30% were (44.0%) while <15% were(34.0%) while >30% were (22.0%), regarding having an old father/mother the most of the participants answer No were (82.0%) while answer Yes were(18.0%), regarding the type of household the majority of the respondents agricultural family were (66.0%) but Non-agricultural family were (34.0%), regarding the relationships with their grandparents the majority of the respondents they are not alive were (41.0%) but Not so close were (32.0%) while Close relationship were (27.0%), regarding the education status the majority of the respondents medium were (29.0%) but illiterate were (27.0%) while low and high were (22.0%), regarding the income the majority of them had low were (31.0%) while medium and high were (29.0%) but medium-high were (11.0%), regarding the you smoke the most of participant answer No were (63.0%) while Yes were (37.0%) .

Table 2 Distribution of basic characteristics of dental caries**.**

Distribution of basic characteristics of dental caries.			**Chi-square**	
	N	**%**	**X^2**	**P-value**
Decayed, missing and filled teeth (DMFT)				
Yes	134	67	104.44	<0.001*
No	42	21		
I don't know	24	12		
Decayed teeth (DT)				
Yes	136	68	110.08	<0.001*
No	24	12		
I don't know	40	20		
Missing teeth (MT)				
Yes	62	31	7.24	0.0268*
No	84	42		
I don't know	54	27		
Filled teeth (FT)				
Yes	74	37	12.04	0.0024*
No	44	22		
I don't know	82	41		
Decayed root (D F root)				
Yes	148	74	148.96	<0.001*
No	24	12		
I don't know	28	14		
Decayed root (D root)				
Yes	132	66	101.92	<0.001*
No	20	10		
I don't know	48	24		
Filled root (F root)				

Yes	66	33		
No	74	37	1.48	0.477
I don't know	60	30		

Regarding distribution of basic characteristics of dental caries regarding Decayed, missing and filled teeth (DMFT) a statistical significant relation were P=value 0.001 and X^2 104.44, the majority of the Participants answer Yes were (67.0%) followed by No were (21.0%) while I don't know were (12.0%), regarding Decayed teeth (DT) a statistical significant relation were P=value 0.001 and X^2 110.08, the majority of the Participants answer Yes were (68.0%) followed by I don't know were (20.0%) while No were (12.0%), regarding Missing teeth (MT) a statistical significant relation were P=value 0.0268 and X^2 7.24, the majority of the Participants No were (42.0%) followed by Yes were (31.0%) while I don't know were (27.0%), regarding Filled teeth (FT) a statistical significant relation were P=value 0.0024 and X^2 12.04, the majority of the Participants I don't know were (41.0%) followed by Yes were (37.0%) while No (22.0%), regarding Decayed root (D F root) a statistical significant relation were P=value 0.001 and X^2 148.96, the majority of the Participants answer Yes were (74.0%) followed by I don't know were (14.0%) while No were (12.0%), regarding Decayed root (D root) a statistical significant relation were P=value 0.001 and X^2 101.92, the majority of the Participants answer Yes were (66.0%) followed by I don't know were (24.0%) while No were (10.0%), regarding Filled root (F root) no statistical significant relation were P=value 0.477 and X^2 1.48, the majority of the Participants answer No were (37.0%) followed by Yes were (33.0%) while I don't know (30.0%)

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able 3 Distribution of Knowledge of respondents relating in dental caries in caries management

	Correct responses		**In Correct responses**		**Chi-square**	
	No	**%**	**No**	**%**	**X^2**	**P-value**
CAMBRA (caries management by risk assessment)	152	76	48	24	53.045	<0.001*
ICCMS (caries management by caries classification and personalized treatment plan)	130	65	70	35	17.405	<0.001*
Selective caries removal (depending on the depth of the lesion)	116	58	84	42	4.805	0.0284*
Cavitated carious lesion (presenting with breaks on the surface of the enamel)	132	66	68	34	19.845	<0.001*
Consistency (hardness) of carious dentin is important in selective caries removal techniques	134	67	66	33	22.445	<0.001*

Regarding distribution of Knowledge of respondents relating in dental caries in caries management regarding CAMBRA (caries management by risk assessment a statistical significant relation were P=value 0.001 and X^2 53.045, the majority of the Participants

answer correct responses were (76.0%) followed by in Correct responses were (24.0%), regarding ICCMS (caries management by caries classification and personalized treatment plan) a statistical significant relation were P=value 0.001 and X^2 17.405, the majority of the Participants answer Correct responses were (65.0%) followed in Correct responses were (35.0%), regarding Selective caries removal (depending on the depth of the lesion) a statistical significant relation were P=value 0.0284 and X^2 4.05, the majority of the Participants answer Correct responses were (58.0%) followed by in Correct responses were (42.0%), regarding Cavitated carious lesion (presenting with breaks on the surface of the enamel) a statistical significant relation were P=value 0.001 and X^2 19.845 the majority of the Participants answer Correct responses were (68.0%) followed by in Correct responses were (34.0%), regarding Consistency (hardness) of carious dentin is important in selective caries removal techniques a statistical significant relation were P=value 0.001 and X^2 22.445, the majority of the Participants answer Correct responses were (67.0%) followed by in Correct responses were (33.0%)

Table 4: Distribution of responses of participants to dental caries in caries management

Items	Disagree		I don't know (Neutral)		Agree		Chi-square	
	No	%	No	%	No	%	X^2	P-value
The main factor to prevent recurrent caries is appropriate restorative techniques with the	26	13	42	21	132	66	97.96	<0.001*
placement of restorative material on a clean caries-free prepared cavity	18	9	56	28	126	63	90.04	<0.001*
Carious lesion must be completely removed to prevent further progression that may affect the vitality of the pulp	12	6	22	11	166	83	222.76	<0.001*
For private practice, a possible disadvantage of applying minimally invasive approaches is that their price is less than the conventional restorative treatments	42	21	46	23	112	56	46.36	<0.001*

Regarding distribution of responses of participants to dental caries in caries management regarding The main factor to prevent recurrent caries is appropriate restorative techniques with the a statistical significant relation were P=value 0.001 and X^2 97.96, the majority of the Participants answer agree were (66.0%) followed by I don't know (Neutral) were (21.0%) while disagree were (13.0%), regarding placement of restorative material on a clean caries-free prepared cavity a statistical significant relation were P=value 0.001 and X^2 90.04, the majority of the Participants answer agree were (63.0%) followed by I don't know (Neutral) were (28.0%) while disagree were (9.0%), regarding Carious lesion must be completely removed to prevent further progression that may affect the vitality of the pulp a statistical significant relation were P=value 0.001 and X^2 83.0, the majority of the Participants answer agree were (83.0%) followed by I don't know (Neutral) were (11.0%) while disagree were (6.0%), regarding for private practice, a possible disadvantage of applying minimally invasive approaches is that their price is less than the conventional restorative treatments a statistical significant relation were P=value 0.001 and X^2 46.36, the

majority of the Participants answer agree were (56.0%) followed by I don't know (Neutral) were (23.0%) while disagree were (21.0%)

Discussion

The study shows the socio-demographic details included (200) participant dental caries in adult's patients in Saudi Arabia were enrolled in this study, among the dental caries in adult's patients almost practiced oral hygiene and needed help of caretaker to do oral hygiene, in our study Regarding the distribution of the socio-demographic details among the adults patients regarding age majority of the study groups from the 35 to 44 years were (44.0%) , regarding the gender many of the respondents were male (53.0 %), regarding the residence area the majority of the respondents urban were (76.0%), regarding the percentage of the patients visited in the last month in the age group over 65 the most of the participants 15–30% were (44.0%), regarding having an old father/mother the most of the participants answer No were (82.0%), regarding the type of household the majority of the respondents agricultural family were (66.0%), regarding the relationships with their grandparents the majority of the respondents they are not alive were (41.0%), regarding the education status the majority of the respondents medium were (29.0%), regarding the you smoke the most of participant answer No were (63.0%).(See table 1).

regarding the distribution of basic characteristics of dental caries teeth Caries is a condition in which cultural and sanitary practices play a significant role, and the illness's prevalence is strongly connected to these variables.[25] It is very important to determine these characteristics because they have proven temporal and geographic stability and because they serve as a tool for customizing appropriate health education programs to address oral health issues, particularly among those who are in need. Caries is a disease that mostly affects adolescents and old people, and research conducted out in Saudi Arabia have shown that this is a significant issue [26]. The conclusions of this survey indicated several numbers that demonstrate the inadequate level of oral health condition in Saudi Arabia. The investigation was carried out in Saudi Arabia, dental caries was the fourth most expensive disease to treat [21], in our study basic characteristics of dental caries regarding Decayed, missing and filled teeth (DMFT) a statistical significant relation were P=value 0.001 and X2 104.44, the majority of the Participants answer Yes were (67.0%), regarding Decayed teeth (DT) a statistical significant relation were P=value 0.001 and X2 110.08, the majority of the Participants answer Yes were (68.0%), regarding Missing teeth (MT) a statistical significant relation were P=value 0.0268 and X2 7.24, the majority of the Participants No were (42.0%), regarding Filled teeth (FT) a statistical significant relation were P=value 0.0024 and X2 12.04, the majority of the Participants I don't know were (41.0%), regarding Decayed root (D F root) a statistical significant relation were P=value 0.001 and X2 148.96, the majority of the Participants answer Yes were (74.0%), regarding Decayed root (D root) a statistical significant relation were P=value 0.001 and X2 101.92, the majority of the Participants answer Yes were (66.0%), regarding Filled root (F root) no statistical significant relation were P=value 0.477 and X2 1.48, the majority of the Participants answer No were (37.0%) (See table 2)

The findings of this research are similar with recent investigations that show dental caries in Saudi adults patients is on the rise, and various variables are considered to be to blame. These determinants involve poor food habits, poor dental hygiene, and service shortages, as well as pain-oriented health-seeking behavior among developing-country people [27]. Caries incidence is growing in several Arab nations as a result of latest industrial expansion, which has resulted in an increase in intake of refined sugars comparable to the majority of the developing world, particularly Africa [28] , also the findings in a similar study it was found that demonstrated that individuals with caries ingested cariogenic food more often than their caries-free counterparts. This is similar with the findings of earlier cross-sectional studies[26], which found a link among poor oral hygiene practices and regular sugar consumption in Saudi elderly patients and caries incidence.

Regarding our study reported distribution of Knowledge of respondents relating in dental caries in caries management, distribution of Knowledge of respondents relating in dental caries in caries management regarding CAMBRA (caries management by risk assessment a statistical significant relation were P=value 0.001 and X2 53.045, the majority of the Participants answer correct responses were (76.0%), regarding ICCMS (caries management by caries classification and personalized treatment plan) a statistical significant relation were P=value 0.001 and X2 17.405, the majority of the Participants answer Correct responses were (65.0%), regarding Selective caries removal (depending on the depth of the lesion) a statistical significant relation were P=value 0.0284 and X2 4.05, the majority of the Participants answer Correct responses were (58.0%), regarding Cavitated carious lesion (presenting with breaks on the surface of the enamel) a statistical significant relation were P=value 0.001 and X2 19.845 the majority of the Participants answer Correct responses were (68.0%) (See Table 3)

According to the findings of our study of Saudi Arabians' knowledge and awareness of dental caries in adult's patients attending in the Primary health care, it is important to emphasize that many Saudis have sufficient understanding about the significance of oral health and dental caries in adult's patients attending in the Primary health care. Our findings reflect that poor oral health hygiene may lead to the dental caries disorders. These results are consistent with, [20] who stated that oral squamous cell carcinomas (OSCC) belong to the most frequent tumors in Southeast Asia. They discovered that poor oral hygiene is closely linked to oral malignancies. It increases the likelihood of cancer of recognized carcinogens such as smoke and alcohol. In compared to other nations, Saudi Arabia has a low level of knowledge about oral health and cleanliness [29]. This is a worrisome problem since research has indicated that the prevalence of oral cancer is growing in Saudi Arabia [27]

As a result, there is a need for more comprehensive oral health education programs about dental caries and efforts in Saudi Arabia to raise awareness and encourage excellent oral health habits and dental caries among the general adult's patients. Therefore, individuals may take actions to avoid the development of oral illnesses and enhance their overall health and well-being by increasing their elderly patients and avoid the dental caries and oral health literacy[29] .(See table4)

Conclusion

Risk of dental caries was significantly associated with awareness of oral frailty. Additionally, awareness of dental caries was found to be influenced by factors such as gender, age, residential area, exercise habits, eating a balanced diet, consciousness of oral health, risk of oral frailty, and outpatient category even after adjusting for possible confounders.

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