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Knowledge and attitude on tooth wear among Najran population, KSA

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Abstract:

Tooth wear is the loss of a hard dental surface. This condition might occur due to some external or internal factors. The physiological, as well as pathological factors also caused loss of tooth surface. The aim of the following survey was to evaluate the knowledge and attitude of the Najran population about tooth wear. A questionnaire-based study was conducted among the people of Najran. Questions regarding attitude and knowledge about tooth wear were asked from the participants. Data were collected and statistically analyzed. It has been seen that participants of both genders almost have the same knowledge about tooth wear. However, females were more concerned with their dietary habits and the use of fluoride toothpaste. The participants of all age groups were well familiar with tooth wear and its prevention. It has been clear from the results that residents of Najran have good knowledge about the causes of tooth wear and its prevention but there is a need to increase their practices and change their food habits to avoid the severity of Tooth wear.

Keywords: Tooth wear (TW), pathological, dietary, severity, Prevention

Background:

Tooth wear is one of the most severe dental conditions which increased the risk of irreversible loss of normal dental tissues, especially hard tissues that lose their intact with teeth and hence caused certain oral limitations. [1, 2] Erosive tooth wear is the most lethal and harmful condition which is caused by different factors such as intrinsic which includes the gastric reflux and excessive vomiting and extrinsic which includes the acidic foods and drinks and acid fumes. In such conditions at an early stage, patients usually don't feel the clinical symptoms while on the other hand, in later stages, erosion increased the risk of damaging the hard dental tissues and other serious medical conditions observed such as tooth hypersensitivity, the high abundance of loss of occlusal vertical height and pulp. [3] Tooth surface loss (TSL), or tooth wear (TW) is the loss of dental hard tissue that is characterized by the interaction with normal dental tissues that leads to the destruction of overall teeth structure. [4] TSL is considered a physiological or pathological condition and physiological TSL occurs as a result of mastication. Physiological TSL is also caused by friction between teeth with close intact combinations. [5] Erosive tooth wear is one of the most versatile dental conditions that are characterized through the impact of intrinsic and well as extrinsic acids [6] on hard dental tissues. Extrinsic acids that are the most toxic and lethal form arise from the ingestion of toxic food, including juices or drinking of soft drinks as well as sports drinks; while on the other hand, intrinsic acids that make the mouth unpleasant as the result of the egestion or vomiting. [7] Some case and experimental studies showed that inadequate usage of toxic acids especially the carbonated and most toxic beverages may cause tooth wear in elderly patients. [8, 9] It has been seen that chemical components present in the food have more effects on the teeth of young people. [8, 10] Some biological and medical remedies have used the protection. These remedies are protective factors in the form of fluoride toothpaste and biological factors for demisting the saliva as it is directly contacted with teeth and helps in chewing and biting the hard items. [11, 12] Acidic compounds as well as compounds that cause acidity significantly lower the function of soft dental tissues and ultimately lead to tooth surface loss. [13, 14] It was observed that there is a high rate of the occurrence of erosive tooth wear and it had seen in case of patients for treatment of dental repair in young people. [15, 16] It was estimated that this rate of tooth wear is about 30.4% in the case of children and adolescents aged 8 to 19 years. [9] There is a strong relationship between dietary acids and tooth wear that makes the compact surface with the dental tissues and declines their softness. [17,18] In 2015, it was estimated that 13.3 billion liters of soft drinks were consumed as regular drinks in well-developed countries like the UK with an average intake of 203.6 liters per capita. [19] In some countries, it has been observed that fruit flavorings had been

increased in large quantities. [19] While, excessive use of cola has also increased in the world due to the high demand for fast food items. [20] People thought that small fruit slices when added to water may decrease the erosive potential. [21] It was studied that excessive use of sweets, lozenges or medications has also increased the risk of the large erosive potential when regularly used in the form of cooking. It was reported that some well-developed countries have a wide range of food, drinks and potential use of medications as the erosive potential that can cause serious organ damage. These include acidic items, and other fruits terms such as bananas and peaches being on the lower end of the acid spectrum. [22] Children must have a good dental attitude and enough knowledge for the protection of teeth from tooth wear. They learn oral hygiene habits from their parents. A study which was carried out in Norway demonstrated that young adults (aged 18-20) have 88-93% knowledge about tooth wear. [23] Another major clinical-based observational study in Northwest England showed that among 105 patients aged 21-78 years, only one-third of participants answered correctly. [24] The major aims of this survey were to (1) evaluation of the knowledge about tooth wear in residents of the Najran community under different age groups and (2) to find their attitude towards the causes and prevention of tooth wear.

Material and Methods:

A questionnaire-based study was carried out the evaluation of attitude and knowledge about tooth wear in the population of Najran. Based on the previous studies, reviews of literature and the experience of professionals, a questionnaire was developed. The questionnaire was divided into different sections which contain questions about demographic details of participants, their dental health, their dietary habits, their attitude and knowledge about tooth wear. The purpose of the survey was explained to all the participants and their consent was taken. Collected data was arranged and statistically analyzed in terms of frequency. A Chi-square test was applied to check the significance of the collected data.

Inclusion and exclusion criteria:

People from the Najran community were included in this survey and no one is exempt from participating in this study from the Najran population except those who did not give their consent.

Table 1: Demographic Details of Participants

Parameter	N	Percentage
Gender		
Female	296	48.4
Male	316	51.6
Total	612	100.0
Age		
Below 30 years	350	57.2
31-60	257	42.0
Above 61 years	5	0.8
Total	612	100.0

Table 2: comparison of dental health of participants with respect to gender

Response			Total	Chi-square	p-value
	Females	Male			
Do you have sensitive teeth?	Yes	135 22.1%	106 17.3%	241	9.318
	No	161 26.3%	210 34.3%		
Have your teeth become shorter and less noticeable before?	Yes	63 10.3%	101 16.5%	164	8.884
	No	233 38.1%	215 35.1%		
Do you feel your teeth flat?	Yes	67 10.9%	76 12.4%	143	0.171
	No	229 37.4%	240 39.2%		

Do you experience creaking or grinding on your teeth?	Yes	71 11.6%	94 15.4%	165 27.0%	2.575	0.109
	No	225 36.8%	222 36.3%	447 73.0%		
Do you notice a change in the bite of your teeth?	Yes	116 19.0%	130 21.2%	246 40.2%	0.242	0.623
	No	180 29.4%	186 30.4%	366 59.8%		
Do you feel pain or tightness in your face after waking up?	Yes	69 11.3%	49 8.0%	118 19.3%	5.981	0.014
	No	227 37.1%	267 43.6%	494 80.7%		
Does someone in your family tell you about the sound of gnashing of teeth while you sleep?	Yes	39 6.4%	51 8.3%	90 14.7%	1.070	0.301
	No	257 42.0%	265 43.3%	522 85.3%		

P >0.05 = Non Significant, P<0.05 = Significant, P<0.01= Highly significant

Table 3: Comparison between gender and their food habits

Response			Total	Chi-square	p-value	
	Females	Male				
Does your food or drinks contain a lot of acids or citrus fruits?	Yes	125 20.4%	164 26.8%	289 47.2%	5.733	0.017
	No	171 27.9%	152 24.8%	323 52.8%		
Do you leave food or drinks in your mouth for a long time before swallowing?	Yes	34 5.6%	54 8.8%	88 14.4%	3.896	0.048
	No	262 42.8%	262 42.8%	524 85.6%		
Do you drink acidic drinks before going to bed?	Yes	49 8.0%	69 11.3%	118 19.3%	2.739	0.098
	No	247 40.4%	247 40.4%	494 80.7%		
Do you drink sports drinks (energy) during exercise?	Yes	36 5.9%	74 12.1%	110 18.0%	13.133	0.000
	No	260 42.5%	242 39.5%	502 82.0%		
Do you wash your mouth or drink water immediately after drinking cola or similar drinks?	Yes	159 26.0%	140 22.9%	299 48.9%	5.419	0.020
	No	137 22.4%	176 28.8%	313 51.1%		
Do you brush your teeth immediately after drinking juice?	Yes	60 9.8%	49 8.0%	109 17.8%	2.370	0.124
	No	236 38.6%	267 43.6%	503 82.2%		
Do you use juice lollipops when drinking soft drinks?	Yes	97 15.8%	92 15.0%	189 30.9%	0.957	0.328
	No	199 32.5%	224 36.6%	423 69.1%		

P >0.05 = Non Significant, P<0.05 = Significant, P<0.01= Highly significant

Table 4: Comparison of gender and their attitude towards dental care

Response			Total	Chi-square	p-value	
	Females	Male				
Do you think your mouth is always dry?	Yes	88 14.4%	92 15.0%	180 29.4%	0.028	0.867
	No	208 34.0%	224 36.6%	432 70.6%		
Do you have any systemic diseases?	Eating Disorder	46 7.5%	22 3.6%	68 11.1%	12.591	0.002
	Stomach reflux	24 3.9%	37 6.0%	61 10.0%		
	None	226 36.9%	257 42.0%	483 78.9%		
Do you work in an acidic environment?	Yes	25 4.1%	30 4.9%	55 9.0%	0.205	0.651
	No	271 44.3%	286 46.7%	557 91.0%		
Do you have a habit of biting on hard objects?	Yes	85 13.9%	109 17.8%	194 31.7%	2.356	0.125
	No	211 34.5%	207 33.8%	418 68.3%		
What type of toothbrush do you use for brushing?	Hard	11 1.8%	13 2.1%	24 3.9%	7.715	0.052
	Soft	131 21.4%	129 21.1%	260 42.5%		
	Medium	101 16.5%	89 14.5%	190 31.0%		
	I don't know	53 8.7%	85 13.9%	138 22.5%		
Do you use toothpaste that contains fluoride?	Yes	235 38.4%	217 35.5%	452 73.9%	9.098	0.003
	No	61 10.0%	99 16.2%	160 26.1%		
Do you care about using fluoride toothpaste?	Yes	190 31.0%	169 27.6%	359 58.7%	7.227	0.007
	No	106 17.3%	147 24.0%	253 41.3%		

P >0.05 = Non Significant, P<0.05 = Significant, P<0.01= Highly significant

Table 5: Knowledge and attitude of participants about Tooth wear and with respect to gender

Response			Total	Chi-square	p-value	
	Females	Male				
Do you think tooth erosion is a problem and needs treatment?	Yes	279 45.6%	269 44.0%	548 89.5%	13.606	0.000
	No	17 2.8%	47 7.7%	64 10.5%		
If you know that your teeth are eroding, will you go to the dentist immediately?	Yes	260 42.5%	248 40.5%	508 83.0%	9.486	0.002
	No	36 5.9%	68 11.1%	104 17.0%		

To prevent tooth erosion, will you change your eating habits (such as controlling your consumption of soft drinks)?	Yes	267 43.6%	252 41.2%	519 84.8%	12.966	0.000
	No	29 4.7%	64 10.5%	93 15.2%		
To prevent tooth erosion, will you change your behavioral habits (such as drinking from a banana / straw)?	Yes	267 43.6%	263 43.0%	530 86.6%	6.408	0.011
	No	29 4.7%	53 8.7%	82 13.4%		
Do you think dental health is as important as general health?	Yes	290 47.4%	296 48.4%	586 95.8%	6.954	0.008
	No	6 1.0%	20 3.3%	26 4.2%		

P >0.05 = Non Significant, P<0.05 = Significant, P<0.01= Highly significant

Table 6: Comparison of dental health of participants with respect to age

Response		Below 30 years	31 - 60 years	Above 61 years	Total	Chi-square	p-value
Do you have sensitive teeth?	Yes	117 19.1%	120 19.6%	4 0.7%	241 39.4%	14.406	0.001
	No	233 38.1%	137 22.4%	1 0.2%	371 60.6%		
Have your teeth become shorter and less noticeable before?	Yes	82 13.4%	78 12.7%	4 0.7%	164 26.8%	10.893	0.004
	No	268 43.8%	179 29.2%	1 0.2%	448 73.2%		
Do you feel your teeth flat?	Yes	68 11.1%	75 12.3%	0 0.0%	143 23.4%	9.411	0.009
	No	282 46.1%	182 29.7%	5 0.8%	469 76.6%		
Do you experience creaking or grinding on your teeth?	Yes	86 14.1%	75 12.3%	4 0.7%	165 27.0%	8.802	0.012
	No	264 43.1%	182 29.7%	1 0.2%	447 73.0%		
Do you notice a change in the bite of your teeth?	Yes	129 21.1%	115 18.8%	2 0.3%	246 40.2%	3.838	0.147
	No	221 36.1%	142 23.2%	3 0.5%	366 59.8%		
Do you feel pain or tightness in your face after waking up?	Yes	68 11.1%	48 7.8%	2 0.3%	118 19.3%	1.444	0.486
	No	282 46.1%	209 34.2%	3 0.5%	494 80.7%		
Does someone in your family tell you about the sound of gnashing of teeth while you sleep?	Yes	47 7.7%	42 6.9%	1 0.2%	90 14.7%	1.116	0.572
	No	303 49.5%	215 35.1%	4 0.7%	522 85.3%		

P >0.05 = Non Significant, P<0.05 = Significant, P<0.01= Highly significant

Table 7: Comparison between age groups and their food habits

Response		Below 30 years	31 - 60 years	Above 61 years	Total	Chi-square	p-value
Does your food or drinks contain a lot of acids or citrus fruits?	Yes	164 26.8%	124 20.3%	1 0.2%	289 47.2%	1.614	0.446
	No	186 30.4%	133 21.7%	4 0.7%	323 52.8%		
Do you leave food or drinks in your mouth for a long time before swallowing?	Yes	53 8.7%	33 5.4%	2 0.3%	88 14.4%	3.326	0.190
	No	297 48.5%	224 36.6%	3 0.5%	524 85.6%		
Do you drink acidic drinks before going to bed?	Yes	77 12.6%	40 6.5%	1 0.2%	118 19.3%	3.945	0.139
	No	273 44.6%	217 35.5%	4 0.7%	494 80.7%		
Do you drink sports drinks (energy) during exercise?	Yes	78 12.7%	30 4.9%	2 0.3%	110 18.0%	12.979	0.002
	No	272 44.4%	227 37.1%	3 0.5%	502 82.0%		
Do you wash your mouth or drink water immediately after drinking cola or similar drinks?	Yes	176 28.8%	121 19.8%	2 0.3%	299 48.9%	0.767	0.681
	No	174 28.4%	136 22.2%	3 0.5%	313 51.1%		
Do you brush your teeth immediately after drinking juice?	Yes	69 11.3%	40 6.5%	0 0.0%	109 17.8%	2.836	0.242
	No	281 45.9%	217 35.5%	5 0.8%	503 82.2%		
Do you use juice lollipops when drinking soft drinks?	Yes	113 18.5%	74 12.1%	2 0.3%	189 30.9%	1.043	0.594
	No	237 38.7%	183 29.9%	3 0.5%	423 69.1%		

P >0.05 = Non Significant, P<0.05 = Significant, P<0.01= Highly significant

Table 8: Comparison of age groups and their attitude towards dental care

Response		Below 30 years	31 - 60 years	Above 61 years	Total	Chi-square	p-value
Do you think your mouth is always dry?	Yes	107 17.5%	72 11.8%	1 0.2%	180 29.4%	0.681	0.711
	No	243 39.7%	185 30.2%	4 0.7%	432 70.6%		
Do you have any systemic diseases?	Eating disorder	31 5.1%	37 6.0%	0 0.0%	68 11.1%	46.662	0.000
	Stomach reflux	13 2.1%	46 7.5%	2 0.3%	61 10.0%		
	None	306 50.0%	174 28.4%	3 0.5%	483 78.9%		

Do you work in an acidic environment?	Yes	28	24	3	55	16.364	0.000
	No	322	233	2	557		
Do you have a habit of biting on hard objects?	Yes	128	63	3	194	11.816	0.003
	No	222	194	2	418		
What type of toothbrush do you use for brushing?	Hard	14	10	0	24	6.740	0.346
	Soft	138	119	3	260		
	Medium	108	80	2	190		
	I don't know	90	48	0	138		
Do you use toothpaste that contains fluoride?	Yes	238	211	3	452	15.762	0.000
	No	112	46	2	160		
Do you care about using fluoride toothpaste?	Yes	179	178	2	359	20.783	0.000
	No	171	79	3	253		

P >0.05 = Non Significant, P<0.05 = Significant, P<0.01= Highly significant

Table 9: Knowledge and attitude of participants about Tooth wear and with respect to their age

Response		Age Group			Total	Chi-square	p-value
		Below 30 years	31 - 60 years	Above 61 years			
Do you think tooth erosion is a problem and needs treatment?	Yes	305	238	5	548	5.314	0.070
	No	45	19	0	64		
If you know that your teeth are eroding, will you go to the dentist immediately?	Yes	292	212	4	508	0.125	0.940
	No	58	45	1	104		
To prevent tooth erosion, will you change your eating habits (such as controlling your consumption of soft drinks)?	Yes	287	228	4	519	5.227	0.071
	No	63	29	1	93		
To prevent tooth erosion, will you change your behavioral habits (such as drinking from a banana / straw)?	Yes	292	234	4	530	7.609	0.022
	No	58	23	1	82		
Do you think dental health is as important as general health?	Yes	330	251	5	586	4.385	0.112
	No	20	6	0	26		

P >0.05 = Non Significant, P<0.05 = Significant, P<0.01= Highly significant

Results:

A total of 612 people from Najran including 296 females and 316 males participated in this survey. These participants were divided into three different age groups, i) Below 30 years ii) 31-60 years and iii) above 61 years (Table 1). 135 (22.1%) females and 106 (17.3%) male participants said that they have sensitive teeth. A total of 164 (26.8%) people (63 females and 101 males) admitted that their teeth become shorter and less noticeable. The number of participants who felt their teeth flat were 67 females (10.9%) and 76 male (12.4%). only 165 (27.0%) participants out of 612 experienced creaking and grinding of teeth. A total of 246 (40.2%) people including 116 females and 130 males did notice a change in their teeth bite while 366 (59.8%) did not notice this type of change. 69 female participants and 49 male participants said that they feel pain and tightness of the face after waking up while the remaining participants did not experience it. 39 female and 51 male participants (6.4% and 8.3 % respectively) said that their family members noticed teeth gnashing while sleeping. Half responses (pain and tightness in the face, sensitive teeth and shorter teeth) were significant (P<0.05) while other questions showed a non-significant responses (Table 2). Participants answered the questions about their food habits. Among 612 participants 289 (47.2%) agreed that their food contain acids and citrus fruits while 323 (52.8%) people denied it. A large number of participants (85.6%) said that

they did not leave food and drinks in their mouth before swallowing and only 88 (14.4%) people agreed about these habit. 494 (80.7%) participants out of 612 did not use acidic drinks before going to bed and 118 (19.3%) use acidic drinks. Only 110 people (18.0%) have a habit of drinking sports drinks during exercise. 299 (48.9%) participants said they wash their mouths immediately after drinking cola drinks and 313 (51.1%) don't wash their mouths. Only 109 (17.8%) participants brush their teeth after drinking juice and 189 (30.9%) people agreed that they use juice lollipops when drinking soft drinks. All the answers were significant (P<0.05) except for the last two responses (Table 3). 88 females and 92 males said that their mouths remain always dry. About the question of any systematic disease, 68 % of participants (46 females and 22 males) said that they have an eating disorder, 61 (10.0%) participants (24 females and 37 males) had stomach reflux while the others (78.9%) did not have any systemic disease. A few number of participants (9.0%) including 25 females and 30 males worked in acidic environments. Most of the participants (211 females and 207 males) did not have a habit of biting on hard objects while 194 (31.7%) participants had this habit. 11 (1.8%), 131 (21.4%), 101 (16.5%) female participants said that they use hard, soft and medium toothbrush respectively while 53 (8.7%) didn't know the type of toothbrush. Among male participants, 13 (2.1%), 129 (21.1%) and 89 (14.5%) said that they use hard, soft and medium

toothbrushes respectively and 85 (13.9%) didn't know the toothbrush type. A total of 452 (73.9%) participants used fluoride-containing toothpaste and 359 (58.7%) agreed that they care about using fluoride toothpaste. Some responses were significant ($P < 0.05$ and $P < 0.01$) whereas some questions (dry mouth, work in an acidic environment, biting habit) had a non-significant response (Table 4). About the knowledge of tooth erosion, 279 (45.6%) females and 269 (44.0%) males thought that this problem needs treatment while a few participants (17 females and 47 males) didn't think that tooth erosion is a problem. 260 (42.5%) female participants and 248 (40.5%) male participants said that they will go to the dentist in case of erosion of teeth. 267 females (43.6%) agreed that they will change their eating and behavioral habits to prevent tooth erosion. The number of male participants for the same responses was 252 (41.2%) and 263 (43.0%) respectively. A large number of people (95.8%) agreed that dental health is as important as general health. All responses were significant ($P < 0.05$) (Table 5). Among 241 (39.4%) participants who had sensitive teeth, 117 (19.1%) were below 30 years, 120 (19.6%) were 31-60 years and 4 (0.7%) participants were above 61 years. The people who noticed that their teeth become shorter included 82 (13.4%), 78 (12.7%) and 4 (0.7%) participants from below 30, 31-60 and above 61 years respectively. 68 (11.1%) people aged below 30 years, 75 (12.3%) from 31-60 years felt their teeth flat while the people above 61 years didn't feel their teeth flat. Most of the people 264 (below 30 years) and 182 (31-60 years) didn't experience creaking and grinding of teeth. While most people above 61 years experienced it. Mostly the participants from all age groups didn't notice a change in the bite of teeth. Similarly, the majority of the people from each group (282, 209 and 3) didn't feel pain or tightness of the face after waking up. A similar response was found in another question where people were asked about teeth gnashing while sleeping. All answers exhibited a significant ($P < 0.05$) effect except the response about pain or tightness and teeth-gnashing that showed a non-significant effect (Table 6) 164 (26.8%) participants of age below 30 years, 124 (20.3%) from 31-60 years and only 1 person above 61 years confirmed that their food contains acids and citrus fruits. Only a small number of participants from each group (8.7%, 5.4% and 0.3% respectively) had the habit of leaving drinks in their mouths for a long time before swallowing. Most of the participants 494 (80.7%) didn't drink acidic drinks before going to bed. 272 (44.4%) from below 30 years, 227 (37.1%) from 31-60 years and 3 persons of age above 61 years said that they have a habit of drinking sports drinks during exercise. 48.9% of the participants said that they wash their mouths after drinking cola drinks while 51.1% denied it. Very less number of participants from each age group (69 from below 30 years, 40 from 31-60 years and 2 from above 61 years) had a habit of tooth brushing after drinking juice. All responses for the comparison between age groups and food habits showed a non-significant effect except the response about energy drinks (Table 7). Only 1 person of age above 61 years and 107 (17.5%) people below 30 years thought that their mouth is always dry. 31, 37 participants had eating disorders from the group below 30 years and 31-60 years respectively. 13 (2.1%), 46 (7.5%) and 2 (0.3%) participants (from below than 30, 31-60 and above 61 years respectively) had stomach reflux. A few numbers of participants (28 below 30, 24 from 31-60 and 3 above 6. years) worked in an acidic environment. 128 (20.9%),

63 (10.3%) and 3 (0.5%) participants from below 30, 31-60 and above 61 years respectively had a habit of biting on hard objects. From the age group below 30 years, 138 (22.5%) participants used hard toothbrushes, from the group of 31-60 years 119 used soft toothbrushes while 3 (0.5%) participants used soft toothbrushes. Most of the participants from each age group used fluoride-containing toothpaste and similarly a large number of people did care about using fluoride toothpaste. Most of the responses were significant ($P < 0.05$) except the response about the type of toothbrush and dry mouth (Table 8). A total number of 305 (49.8%) from the group below 30 years, 238 (38.9%) from 31-60 years and all the participants of age above 61 years thought that tooth erosion is a problem that needs treatment. The majority of the participants agreed that they will go to the dentist if their teeth will be eroded. Overall, 519 (84.8%) and 530 participants said that they will change their eating and behavioral habits to prevent the erosion of teeth. Responses about knowledge were not significant (Table 9).

Discussion:

Tooth wear and dental erosion are most common in children and adolescents but in the researcher's community, this condition has attained less attention comparatively. A comprehensive study cleared that the knowledge gap is the main hindrance in the diagnosis of tooth wear, its prevention and treatment. [25] Therefore, it is of interest to check the knowledge about the causes and prevention of tooth wear among people of Najran using a questionnaire-based study. Gastro-esophageal reflux disease (GERD) is considered the main intrinsic risk factor for erosive tooth wear (ETW). [26] It has been reported that intake of fruit juices and fruits on regular basis is a common causative factor for tooth wear. [27] In the current study, 68 and 61 participants had eating disorders and stomach refluxes respectively. Almost 50% of the participants use food that contains a lot of acids. This could be a reason for symptoms of tooth wear in participants. In another study, incorrect answers were given by half of the respondents. It showed the knowledge gaps. However, the questions about energy and sports drinks, mineral water, cola drinks, and fruit juices were correctly answered by almost all respondents. [28] The present survey showed that participants were much aware from the food habits that can cause tooth wear. More than half of the participants had good dietary habits. More than 80 % of the participants of the current survey considered tooth wear a problem that needs treatment. And they are willing to change their eating and behavioural habit for the protection of teeth. In a similar study, 88-94% of participants knew the term tooth wear, but their effects and causes were not familiar to them. [12]

Strengths and limitations of the study:

The inclusion of all age groups was the strength of this study. And these participants were chosen randomly. The sample size could be a limitation of this survey. It may be supposed that participants were more prevention minded.

Conclusion:

It has been clear from the results that residents of Najran have good knowledge about the causes of tooth wear and its prevention. They considered it a dental problem. They also showed a positive

attitude. Most of the participants have healthy food habits but there is a need to increase their knowledge and change their food habits (for example usage of the toothbrush after intake of acidic food) to avoid the severity of Tooth wear.

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