

**KNOWLEDGE AND ATTITUDES TOWARDS MAINTENANCE OF GOOD ORAL
HEALTH AND UTILIZATION OF DENTAL HEALTH SERVICES IN SAKAKA AL
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ABSTRACT

Objective: The main objective of this study is to assess the knowledge and attitudes of adults towards maintenance of good oral health and utilization of dental health services available in Sakaka Al Jouf. **Methodology:** Using cross-sectional descriptive study design, 500 self-administered (Arabic/English) questionnaire was randomly distributed to adult males and females in Sakaka (urban/rural) AL Jouf, Saudi Arabia. The collected data was statistically analyzed using SPSS (version 20, Chicago.inc). Chi square test is used to compare categorical variables and t test for continuous variables. Pilot study was conducted using 10 questionnaires which were pretested to ensure check the feasibility of variables applied and modifications were done accordingly. **Results:** 500 questionnaires were collected, 48 forms were excluded for less than 20 years. Lack of motivation for maintaining good oral hygiene specially in older adults is one of the important findings of study with significant p value ($P < 0.002$). On the other hand the major finding which explains the merit of this study giving an estimate of utilization of dental care services in Sakaka reveals the inadequate number of periodic dental visits among all age groups ($P < 0.000$) indicating under-utilization of dental services, that is out of total of 452 participants 384 (85%) do not go for routine dental check-ups. **Conclusion:** Need of more vigorous oral health promotion and educational activities stressing on routine dental check-ups, need to increase number of preventive dental strategies, increase number of dental facilities and professionals in the region to compensate for prolong appointments.

1. INTRODUCTION**1.1 Background**

Contemporary approach to improve provision and utilization of dental care services relies on the Information collected through patients' surveys.^[1] Surveys have potential impact on the utilization and satisfaction as they convey patient's concerns, desires and views of health care services leading to disseminating health services to everyone.^[2,3] The expansion of healthy oral health practices globally is result of continuous growing awareness amongst the general population.^[4] Similar growth is seen in Kingdom of Saudi Arabia in recent years as more dentists and dental facilities have opened to help improving dental health of population along with building awareness about oral healthcare.^[5] Despite of many emergent dental educational and awareness programs by dental institutes, mass media campaigns and health care services, there is insufficient number of studies evaluating adolescents' concerns regarding dental care services.^[6] In addition to that, the surge of dental caries in the Kingdom owing to changing lifestyle and dietary habits is posing challenge to researchers to conduct more studies focusing on use of preventive dental strategies among Saudi children and

adults.^[7] Since, adults are the trend setters for upcoming generations being parents and guardians, that is why working on enhancing the dental knowledge and increasing the utilization of dental services among Saudi adults will be considered vital for improving the oral health of entire population.^[8]

1.2 Objective

The main objective of this study is to assess the knowledge and attitudes of adults towards maintenance of good oral health and utilization of dental health services available in Sakaka Al Jouf.

2. METHODOLOGY

The study protocol was formally approved by ethics committee at the College of Dentistry Al Jouf University, Al Jouf Saudi Arabia. Using cross-sectional descriptive study design self-administered (Arabic/English) 500 questionnaire were randomly distributed to male and female adults in Sakaka AL Jouf. The questionnaire was designed to include three parts; part 1 will include brief introduction about study, part 2 includes participant's socio-demographic data and part 3 assessing knowledge and attitudes about dental health maintenance and dental

care services accordingly. The collected data is statistically analyzed using SPSS (version 20, Chicago.inc). Chi square test is used to compare categorical variables and t test for continuous variables. Pilot study was conducted using 10 questionnaires which were pretested to ensure check the feasibility of variables applied and modifications were done accordingly.

3. RESULTS

500 questionnaires were distributed and returned, 48 forms were excluded because the age was less than 20 years as the study involves response of adults only

(ranges from 20 and onwards) making total 452 questionnaires that were included in the study. 200 questionnaires were randomly distributed in the main city of Sakaka like neighborhoods, gyms, dental OPD, colleges, coffee shops out of which 197 returned and 300 in outskirts of Sakaka, out of that 255 were filed and returned appropriately. Among total figure, number of male participants were 214(47%) and 238(52%) females were included. **Table 1** illustrates the demographic details of the study.

Table 1: Demographic Details of Study.

Age Groups	(%)	Address	(n)	(%)	Gender	(n)	(%)
20-25 yrs	52.7	Sakaka(city)	197	43.6%	Male	214	47.3
25-35 yrs	28.3	Sakaka(rural)	255	56.3%	Female	238	52.7
35-45 yrs	6.6						
45-55 yrs	6.1						
55-65 yrs	4.8						
Total 452	100.0	Total 452	100.0			452	100.0

The comparative data revealed some important facts and figures especially those related to oral hygiene practices and periodic dental visits. As far as type of daily oral hygiene practice is concerned, brushing is the most common form of daily oral hygiene practices among all age groups (333 out of 452 participants) but its use tends to decrease with increasing age (**Figure 1**). But number of males using Miswak is more than females respectively (**Figure 2**). However, use of brush and other oral hygiene measures seems to reduce with increasing age groups which indicates significant drop in oral hygiene practice with the age as indicated in **Figure 1**.

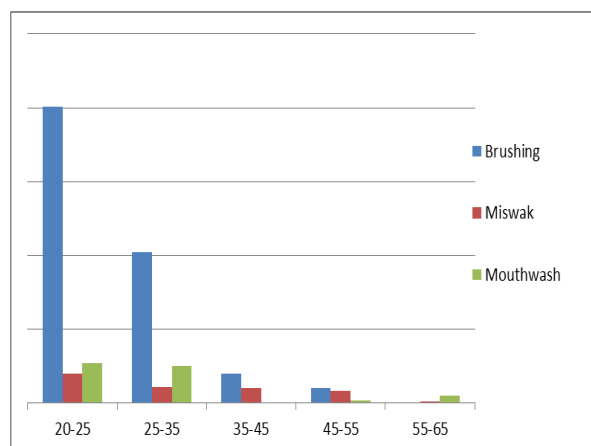


Figure 1: Comparative graph of different forms of oral hygiene practices in different age groups showing brushing as the most common form of oral hygiene practice but use of brushing including other forms of hygiene practices tend to decrease as the age increases.

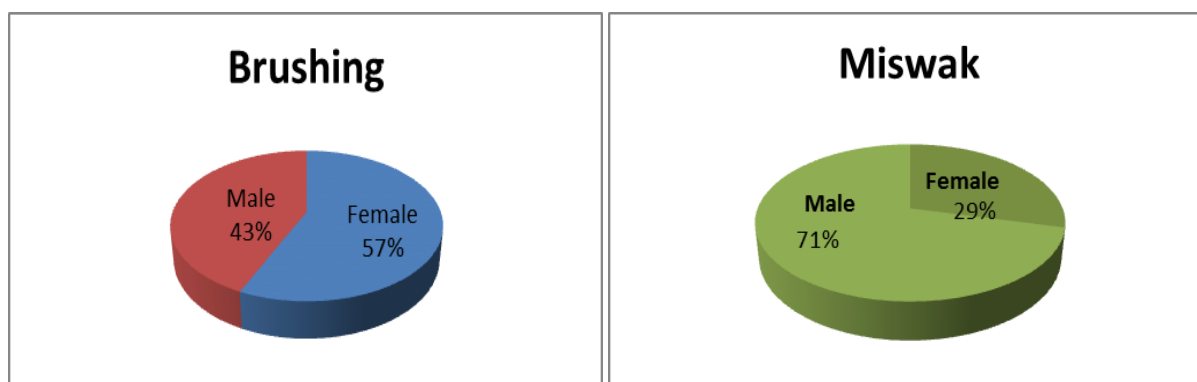


Figure 2: Gender differences in form of percentage for using brush and miswak as daily oral hygiene practice tool.

Table 2: Different forms of oral hygiene practice in different age groups.

		ORAL HYGIENE PRACTICE			Total (n)	CHI SQUARE	
		Brush	Miswak	Mouthwash			P-VALUE
Age Groups	20-25 years	201	20	17	238		
	26-35 years	102	11	15	128		
	36-45 years	20	10	0	36	17.9	
	46-55 years	10	8	2	28		0.002*
	56-65 years	0	1	0	22		
Total		333	50	34	452		

Lack of motivation for maintaining good oral hygiene specially in older adults is one of the important findings of study with significant p value ($P < 0.02$) with Chi square value of 17.9. (Table 2). On the other hand, the major finding which explains the merit of this study giving an estimate of utilization of dental care services in Sakaka Al Jouf, reveals the inadequate number of periodic dental visits among all age groups ($P < 0.000$) indicating underutilization of dental services, that is out of total of 452 participants 382 (85%) do not go for routine dental check-ups (Table 3).

Table 3: Frequency of Dental Visits.

	Frequency	%
Don't have habit	382	85
Once in 3 months	28	6.2
Once in 6 months	19	4.2
Once in a year	21	4.6
Total	452	100%

When results of periodic visits for Sakaka city and outside Sakaka were compared, surprisingly the areas outside Sakaka utilize dental services periodically to slightly greater level although majority still lacking behind. Sakaka being major hub of Dental College providing free dental services and private clinics gave results of only 19% who get periodic dental checkups (197 participants out of 181 do not go for periodic dental checkups). While areas like outside Sakaka 198 out of 254 (77%) also negatively replied for the respected question, see Table 4. As far as gender difference for utilization of dental services is concerned, not much difference was found for both groups, although the percentage of females using dental services was slightly higher than males. Out of 237 females, only 42 (17%) and among males, only 27 out of 214 (13%) regularly visit dentists making a percentage of 87% for males and 83% females who do not have habit of periodic dental checkups.

Table 4: Comparing periodic dental visits to place (Sakaka and Outside).

Periodic visit	Sakaka	Outside	Total		P value
YES	16	56	73		
NO	181	198	379	21.2	0.000**
Total	197	254	452		

4. DISCUSSION

Based on principles of Alma Atta Declaration, the current strategy of standardized preventive and curative health services in majority of countries including Saudi Arabia relies on surveys to evaluate the extent of status of health and behaviors and attitudes toward oral health and to bring oral health into the mainstream i. e. linking oral health with general health.^[9] The objective of this study is also based on the fact that the response of people should be assessed primarily via survey and then necessary measures for shortcomings to be confirmed by more extensive research methodologies and fulfilled accordingly. This also leads to organized planning cycle with premeditated evaluation also serving as significant tool for quality assurance programs.^[10]

Several studies attempt to investigate the factors affecting utilization of dental services in the Kingdom of Saudi Arabia and other parts of the world by scrutinizing the people's feedback towards health care services.^[6] The target group of study is adults for the reason they are role

models for present and upcoming generations along with correcting oral hygiene habits of older adults living with them. Apparently, Kingdom requires more aggressive research studies to assess the pre-existing attitudes and behaviors of people towards daily oral hygiene practices and explore for the reasons they procrastinate the regular dental check-ups in absence of any of dental complain. According to^[11] over half of the dentists in Saudi Arabia agreed that parents needed to improve their attitudes toward dental preventive care. Moreover, the superadded effect of dietary changes in form of increased consumption of sweetened food products and tobacco use is posing more challenge to take necessary actions.^[12]

The two interesting findings of study i. e. types and frequency of daily oral hygiene activities along with periodic dental visits which explains the intent of the study marks adult population of this area at risk specially caries and periodontal diseases. The frequency of daily oral hygiene habits approximately 41% of people brush

their teeth only once and 30% agreed for twice a day usage of brush. However, brushing is common amongst females than males (57% v/s43%) similarly use of miswak is more common in males than females (79 % v/s 29%).

The open questions in questionnaire that attempts to investigate the reasons for the underutilization of dental care revealed some eye opening facts about the area under study. The three most common reasons for not having routine periodic dental checkup included: No need to visit dentist, fear of dental treatment and dentist, and prolong waiting for appointments. Other minor reasons included unavailability of good dental clinic and cost of treatment. According to^[13] about 6% of population avoids visiting dental clinics because of fear and anxiety related to dental treatment. Similar results were achieved from a recent study where the fear related to view and sensation of anaesthetic needles along with sound of drill was amongst most fear full factors.^[14] Regarding the response that they assume that they do not require regular dental checkups in absence of any complain highlights the lack of appropriate knowledge about routine dental visits and prevention of dental diseases.

This mind set needs urgent attention and shift from curative to preventive strategies. Many studies have attempted to see this response in the light of level of education of the participant. The more educated the more is aware about the importance of prevention and healthy oral practices. Some also tried to have this short coming connected to low educational levels along with difference in socioeconomic status of the populations.^[15] This relationship was not observed in our study hence; this cannot be evaluated in the light of above mentioned reasons. Although, contemporary approach of Saudi Government hospitals and dental colleges for provision of dental and preventive services unequivocally free of cost has improved oral health of masses specially in urban areas but in rural areas families still lacking behind in utilization of such free dental services mainly because of lack of awareness of the importance of early or routine dental visits.^[15]

Prolong waiting time for any dental treatment results in people losing interest to go for regular dental checkups as patient tends to lose interest and seek for short and quick fixes or home remedies for dental pain resulting in further delaying the necessary required treatment or sometimes complicating or worsening the condition. Within Kingdom many studies have concluded that prolong waiting and delay or difficulty in getting appointments were discouraging factors as far as utilization of dental services are concerned.^[16,17,18,19] However, in this study some responses also included the doubts of adults regarding availability of good dentists in the area under study.

Also the reason of prolong waiting or difficulty in getting appointments is one of the major reasons that render people to opt alternatives like self-medication or home remedies for relief of dental pain. According to.^[20] Saudi Arabia has high prevalence of using self-medication of antibiotics almost equal to 80% as most of antibiotics in the Kingdom and other countries in the region can be bought from private pharmacies without doctor's prescription. And Antibiotics have been commonly used to suppress or sub side the dental infection and associated pain hence, further delaying the dental visit.^[21]

Hence, keeping in mind the main objective of this study regarding estimation of utilization of dental care services in Sakaka Al Jouf, along with prior knowledge of common people about importance of oral health revealed some important and eye opening facts specially those related to daily oral hygiene practices in older adults and majority of participants both male and female in all age groups negatively replying to question of periodic and routine dental checkups. Although, the study fails to correlate the underutilization of dental services in the region with socio-economic and education status of population. Nevertheless, it discovered the urgent need of oral health education and promotional activities along with information about concealed barriers to access dental care in the region under study like prolong waiting for appointments, unavailability of good quality dental care and dental phobias prevailing in some individuals. All these cumulative factors are significant and illustrate the need to identify the gaps in baseline information and to determine the areas for future research appropriately.

5. CONCLUSION

Need of more vigorous oral health promotion and educational activities stressing on routine dental check-ups, overcoming dental phobias and anxieties, need to increase number of preventive dental strategies, increase number of dental facilities and professionals in the region to compensate for prolong appointments.

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