

Adults Knowledge and Attitude of Family Medicine Practice in Saudi Arabia

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ABSTRACT

Background: suboptimal knowledge on medication practices, safety, and negative attitudes has some negative impact concerning managing different types of diseases.

Objectives: the primary objective of this research work was to measure the public knowledge and to identify their attitudes and practices on medication practices, with mainly focus on colorectal cancer and diabetes. This is because they are ranked as the major diseases in the Kingdom of Saudi Arabia, accounting for about 10.4% according to recent researches

Subjects and methods: the study was based on two cross-sectional surveys focusing on public support and the internet based research.

Results: women constituted 55% of the cohort (n=420). The age of the participants ranged between 18 and 74 with the mean of 37 years. About a quarter of the respondents correctly identified colonoscopy and FOBT as primary screening tools. Seventy percent of the respondents agreed with the statement that there are misconceptions about the contraction of cancer and diabetes. Nearly forty participants reported that they never combined traditional medicine in treating the epidemics with about 30 of them had a failure to ask the community doctors on the need to be checked on the possibility of the having the disease.

Conclusion: majority of the adult had adequate knowledge and attitudes scores, but they were not adhering to health promotion activities. Furthermore, misconceptions in knowledge, attitudes, and practices on medication use were prevalent.

Keywords: Knowledge, Colorectal Cancer, Diabetes.

INTRODUCTION

Colorectal cancer (CRC) is ranked as the second most common cause of female cancer and the third most common cancer among males globally. This scenario is experienced mostly in developing countries; moreover, it is ranked as the fourth leading cause of many deaths after lung, stomach and liver cancer. According to studies, CRC has higher rates in Australia, New Zealand, Europe and the USA, with moderate rates found in Africa and south-central Asia ^[1]. According to cancer statistics, it was estimated that about 6% of the current population globally would develop CRC anytime during their lifetime and as per that study more than half of them will die because of the disease ^[2].

In Asia, a review of literature has shown that there is a gradual increase rate of CRC as well as mortality in many countries such as Singapore, the Kingdom of Saudi Arabia, Japan, and South Korea. In Saudi Arabia, the prevalence of CRC has progressively increased in the period between 2001 and 2006, irrespective of gender and age group ^[3].

CRC is more prevalent in adults aged 50 years and older. However, this epidemic can be controlled through CRC screening which detects the disease during its early stages when the survival rates are high. To create targeted messages and enlightening material aimed at boost participation in testing, it requires that the target population have a good knowledge and attitudes of the condition. The lack of knowledge is a significant CRC risk factor and is a potential barrier towards effective campaigns ^[3].

It has been projected that in the next twenty-five years, diabetes will become one of the world's main killer ^[4], and the Kingdom of Saudi Arabia is not left out. The increase in the prevalence of diabetes in countries such as Saudi Arabia can be attributed to increase in urbanization, which has resulted in a continuous generational paradigm shift of lifestyle from the customary Middle-Eastern model to a more "western" standard. Furthermore, a majority of Saudis have abandoned the healthier conventional lifestyles that featured regular and

vigorous physical activity and sustenance on high fibre whole grain-based diet rich in vegetables and fruits. Instead, there is an over-reliance on motorised means of transportation and eating of unhealthy diets rich in carbohydrates, fats, sugars, and salts^[5]. The resultant effects of this “adopted” regime is a change in disease patterns with communicable diseases being replaced by non-communicable or life style related diseases like diabetes, obesity, cardiovascular disease and cancer^[6].

Diabetes mellitus is the most common endocrine disease and affects several different organ systems. Overtime, it results in a spectrum of syndromes and serious complications. Chronic complications from diabetes can be classified as microvascular or macrovascular. Microvascular complications include neuropathy, nephropathy and retinopathy^[7]. Macrovascular complications include cardiovascular disease, cerebrovascular accidents (CVA), and peripheral vascular disease^[8].

The WHO estimates that about 190 million people have diabetes and almost 330 million are expected to be diabetic by the year 2025. It is the leading cause of blindness and lower limb amputations. Concerning morbidity, adults with diabetes have rates of stroke and death from heart disease that are almost 2 to 4 times higher than adults without diabetes^[9]. Saudi is ranked as the ninth on the prevalence of diabetes. The recent changes in physical activity and dietary patterns have promoted the development of diabetes and if different preventive and control activities are not adopted by the year 2025 more than 9 million saurian will be affected by the disease^[10].

Various researchers show that increasing patient knowledge regarding the disease and its complication has significant benefits with regards to patient compliance to treatment and to decreasing complication that is associated with the epidemic^[11]. Many documented studies show that use of multiple medications, polypharmacy, drug-drug interactions and misdiagnosis are the most significant dangers that are related to medical practices. By evaluating public knowledge and identifying their attitudes and practices on medication use, we can determine the gaps in

this domain. Identifying the gaps will help health professionals raise public awareness in the identified misconceptions. Therefore this study will attempt to identify the challenges affecting the Saudi Arabian people with regards to knowledge, attitude, and practice of CRC and diabetes and its risk factors among adults in Riyadh, Saudi Arabia^[1].

There are a number of factors that are associated with therapy compliance in the management of lifestyle diseases like diabetes and cancer. According to Khan *et al.*^[12] knowledge of the diseases and the attitude of people towards the disease can hugely affect the compliance level of the affected patients. In Saudi Arabia, the level of compliance is low because of the lack of knowledge about the complications that may come as a result of poor compliance^[12].

In a study carried out among medical students of King Faisal University, it was found that many students do not have proper knowledge on diabetes mellitus and associated conditions like diabetic retinopathy^[13]. The results indicated that male students had better knowledge than female but the overall level of knowledge among the medical students was worryingly low. The argument, according to Wadaani^[8] is that there is some lacuna in the teaching of medical students. He posits that to bridge this gap, there is need to improve on the teaching process and measures put in place to ensure that medical students are encouraged to develop positive attitude towards patients having diabetes and other associated conditions.

According to Alyousefi^[14], family medicine is important in the provision of comprehensive and quality care to different populations. In Saudi Arabia, for instance, family medicine is increasingly being recognized because of the rapid rise in the cases of morbidity and mortality caused by preventable diseases. The government of Saudi Arabia recognizes the need to train as many family medicine practitioners as possible to deal with the rising cases of easily preventable diseases. The argument is that the government should address the scarcity of family medicine practitioners as a matter of top priority. In a study carried out among the Saudi Arabian students, it is clear that many Saudis do not

realize the importance of family medicine in the country. The results of the study found that most medical students in Saudi Arabia became aware of the importance of family medicine practice only after going through their clinical practice. The general population is most likely in the dark when it comes to the appreciation of the importance of family medicine practice^[14].

Aim of the study

Owing to the prevalence of colorectal cancer and diabetes mellitus in The Kingdom of Saudi Arabia, this study aimed at exploring public knowledge as well as identifies their attitudes and practices on medication practices, with major focus on colorectal cancer and diabetes mellitus. It is believed that if we can identify the gaps in knowledge and recognize their behavior towards screening and treatment for these life threatening conditions, policies and programs that will attempt to bridge the knowledge gap and change poor attitudes can be put in place.

METHODS

Study design and setting

This study used a cross-sectional survey design that is public-based and internet based. The rationale behind the recruitment of the participants by two selected methods was to identify any demographic difference and the influence of this difference on the participants on medication use and safety. This work relies on the method named above where adults above the age of 18 years and residing in Saudi were targeted. The exclusion criteria were participants who refused to participate in the study or were mentally incapable of communicating. The aim of this research was clearly expressed to the participants before the commencement of the interview process. In addition, these objectives were stated in the electronic version of the questionnaire.

Sample and sampling technique

The study used a non-randomized sampling technique to get the required sample by calculating the required sample size using a sampling size calculation and based on the adult population size. According to the last census done in the year 2010, the total number of adults in the research area was estimated to be

1200000. Based on the population size, the sample size was calculated to be 400. The sample calculation was conducted at 95% confidence level with a margin error of 5%^[15]

Data collection

Data was obtained using a structured questionnaire. Firstly the questionnaire was distributed electronically through the social media. Then we shifted to manual data collection and anyone who had participated in the electronic survey was excluded from the public-based data collection. The use of the electronically questionnaire gave the female an opportunity to take part in this research. The face-to-face interview was another method that was used to get the data from the public based participants. The data collected was collected from public places in the city, including malls, supermarkets, parks, and restaurants. The average time for the interview was 10 minutes. This questionnaire was adapted from previous research works^[10] with some slight modifications. The items were translated into Arabic language using the forward-backward translation method. This survey was tested in ten people to ensure that it has face-validity and will help us achieve the aims of this study. The questionnaire was composed of four sections as shown below.

1. Participants demographic characteristics that include the gender, age in year, the educational level, level of family monthly income, presence of chronic illness.
2. The assessment of knowledge on CRC and diabetes mellitus plus the medication use was done using ten general questions on drug utilization and safety. Responses to these issues were documented as YES or NO with yes taking a score of =1 point and NO=0 point with the points ranging between 0-10 points. This was captured in the questionnaire
3. The questionnaire also included measured attitudes on medication use and safety to cancer screening through five question with Likert's scale responses was applied, i.e., strongly agree, agree, neutral, disagree and strongly disagree to each of the questions.
4. Lastly, the questionnaire included medical practices on the identified epidemics which were investigated through five questions with Likert's

scale responses (Always, usually, sometimes, seldom and never).

Data analysis

The data collected was processed using the software SPSS, version 22. Descriptive statistics were used to express all variables. To minimize data entry errors during that analysis check codes were incorporated into the database and the data was cleaned to ensure consistency of responses.

RESULTS

Table 1: Socio-demographic characteristics and selected data in the research cohort

		Frequency (n)	%
Gender	Female	229	55
	Male	191	45
Age range=18-73			
Marital status	Married	276	66
	Other	144	34
Educational level	Illiterate	44	8
	Primary and secondary education	168	40
	University and above	218	52
Family history of CRC and/or diabetes	Yes	32	8
	No	60	93
Perception of personal health status	Uncertain	42	83
	Poor	30	10

Socio-demographic characteristic was summed up in Table I. Women constituted 55% cohort while men constituted 45%. The age participants ranged between 18 and 73 with the mean of 37 years. Almost 1/3 of the samples size were married while half of it had the university degree and above. Family history CRC and/or diabetes were found to be 8%. In the case of the preventive of CRC and diabetes

about a quarter of the respondents correctly identified colonoscopy and Fecal Occult Blood Test (FOBT) as primary screening tools.

Attitudes on medication use and safety

Table 2: Attitude about CRC in the study cohort

	Frequency (n)	%
Risk perception of contracting CRC		
High	43	10
Not Known	247	59
Low	10	31
Utility of screening test for CRC Prevention		
Useful	103	25
Uncertain	21	25
Useless	20	5

Seventy percent of the respondents agreed with the statement that there are misconceptions about the contraction of cancer and diabetes mellitus. Forty participants (0.1%) reported that they never combined traditional medicine in treating the epidemics, with 30 failing to ask the community doctors on the need of being assessed for either disease (not shown in table).

DISCUSSION

This research was done with objectivity and with crucial scrutiny to investigate the public knowledge, attitudes, and habits of the medical practices and safety in Saudi Arabia. Yasuda *et al*^[8] reported that ethnicity accounted for differences in variability to drugs. The respondents with higher education were predominating among electronically recruited individuals. In 2014, Zimmerman *et al.*^[16] found that education is critical to social and economic development and has a profound impact on population health in individual level, through larger social/ cultural context and community level. Since people with higher level of education usually prefer communication through the means of social media, they constituted the majority of those who have access to such communication.

The purpose of this research was to survey the public knowledge on medication practices and importance of awareness to the

adults. The study revealed gaps in knowledge about both medicine practices and safety. Two serious deficiencies in knowledge items that belong to misconceptions were identified. Overall, the study finding showed a general lack of awareness and understanding about CRC was hence identified important gaps in the literature. Drawing from the responses of the personal items only 1/3 of the target population was able to define CRC correctly. Another crucial finding of the same concept was that only 16% of the respondents answered correctly about red meat being the risk factor for CRC.

Other variables that influenced accurate answers included the higher educational levels, family history of CRC, those practicing regular physical activity and modified it due to fear of contracting the disease as well as those who knew the correct definition of it. These results were in agreement with another majority of previous works that were carried out to explore the correlates of knowledge about cancer in general and CRC in particular among the population.

Preventive practices were associated with being a male, having a family history of CRC, having a sound knowledge of the use of accurate screening tests and perceived risk of developing the disease. In this study, it was found that only one-third of the diabetic patients were aware of diet plan during health, illness, and cardio protective effect of limiting cholesterol, and also the importance of regular exercise. However, reduced level of knowledge about healthy lifestyle could be attributed to negligence to the health care providers in delivering a proper health message to target patients.

According to Asiri^[17], Saudi Arabia recognizes that diabetes is a serious health problem that can only be prevented when people have knowledge about its causes, risk factors and how to avoid the disease. Because of the high level of prevalence of type II Diabetes Mellitus in Saudi Arabia, the government has initiated a primary healthcare program services (PHC) to increase the level of public awareness on Diabetes and how to manage the disease. Such programs, focuses on the giving diabetes information, required lifestyle changes, diet taken by Saudis, exercise regimens and

appropriate medications that can be used in the management of the disease. The policy further recognizes the important role that is played by family medicine doctors in the management and prevention of diabetes diseases. The government of Saudi Arabia has been using the family medicine doctors to spread the awareness on diseases such as diabetes and colorectal cancer. The management of diabetes is important in ensuring that patients are not placed at a risk of getting other related health conditions like retinopathy and renal diseases. The primary healthcare care (PHC) centers in Saudi Arabia have made it possible for the citizens to have better care and better knowledge and awareness on matters to do with Diabetes Through these centers, there is no doubt that Saudi Arabia will be able to deal with the rising cases of Diabetes prevalence^[18].

CONCLUSIONS

Knowledge of the medical practices was moderate. There were gaps in all studied domains. There was also variation in the total knowledge on medication use and the safety between respondents that were recruited manually and electronically. Therefore, the adults should be provided with more information, education and awareness of the CRC infection and its link to adults. These measures will assist raise acceptance about the existence of the disease and dispel myths. Further, the use of multi-educational interventions can be tailored and designed according to the local social and cultural contexts. This intervention can be delivered through the well distributed primary healthcare facilities in the city.

REFERENCES

1. **Bani IA (2015):** Prevalence, knowledge, attitude and practices of diabetes mellitus among jazan population, kingdom of Saudi Arabia. *Journal of diabetes mellitus*, 2:8.
2. **Alharbi OA, Al-Shaia WA, Al-Hamam AA, Al-Marzoug HM, Ahmed AE, Bagha M (2015):** Attitude of Saudi Arabian adults towards consanguineous marriage. *Qatar Medical Journal*, 2:12.
3. **Qidwai KNW (2012):** Health Promotion, disease Prevention and Periodic Health Checks: Perceptions and practice among

- Family Physicians in Eastern Mediterranean Region. *Middle east Journal Of Family Medicine*, 19(1): 26–32.
4. **Ding CH, Teng CL, Koh CN (2008):** Knowledge of Diabetes Mellitus Among Diabetic and Non-Diabetic Patients in KlinikKesihatanSeremban. *Med J Malaysia*, 61:399–404
 5. **Mehta RS, Karki P, Sharma SK (2006):** Risk factors, associated health problems, reasons for admission and knowledge profile of diabetes patients admitted in BPKIHS. *Kathmandu University Med J.*, 4: 11–13.
 6. **International Diabetes Federation (IDF) (2006):** *Diabetes Atlas*. 3rd Edition. Brussels, Belgium.
 7. **American Diabetes Association (2006):** Diagnosis and classification of diabetes mellitus. *Diabetes Care*, 29:S43–S48.
 8. **Deshpande AD, Harris-Hayes M, Schootman M (2008):** Epidemiology of Diabetes and Diabetes-Related complications. *PHYS THER.*, 88:1254-1264.
 9. **Laakso M (2010):** Cardiovascular disease in Type 2 Diabetes From Population to Man to Mechanisms. *Diabetes Care*, 33(2): 442-449
 10. **Jasper US, Opara CM, Pyiki EB (2014):** Prevalence and clinical pattern of Acute and Chronic complications in African diabetic patients. *BJMMR.*, 4(30): 4908-4917
 11. **Al Wutayd FAO (2015):** Colorectal Cancer Risk Factors:A study of knowledge,attitude and practice Among Adults in Riyadh,Saudi Arabia," *Cancer Research journal, Cancer Research Journal*, 3(5): 94-99
 12. **Khan A, Aitan LA, Bu-Khamseen MA, Al Ibrahim I, Khan SA (2012):** Factors contributing to non-compliance among diabetics attending primary health centers in the Al Hasa district of Saudi Arabia. *Journal of Family Community Medicine*, 19(1): 26-31.
 13. **Wadaani FA (2013):** The knowledge attitude and practice regarding diabetes and diabetic retinopathy among the final year medical students of King Faisal University Medical College of Al Hasa region of Saudi Arabia: a cross sectional survey. *Niger Journal of Clinical Medicine*, 16(2): 168-168.
 14. **Alyousefi N (2017):** Knowledge and attitude of Saudi medical students towards the family medicine specialty during their family medicine course and its effect on their career plans: A comparative study, *Biomedical Research*, 28 (5): 2256-2261
 15. **Ravichandran K, Al-Hamdan NA, Mohamed G (2011):** Knowledge, attitude, and behavior among Saudis toward cancer preventive practice. *Journal of Family and Community Medicine*, 18: 135-42
 16. **Yasuda SU, Zhang L, Huang S-M (2008):** The Role of Ethnicity in Variability in Response to Drugs: Focus on Clinical Pharmacology Studies *Clinical Pharmacology & Therapeutics*, 84 (3).
 17. **Zimmerman E, Woolf SH, Hayley A (2015):** Understanding the relationship between education and health: A review of the evidence and an examination of community perspectives. *AHRQ--Agency for Healthcare Research and Quality: Advancing Excellence in Health Care*. <https://www.ahrq.gov/professionals/education/curriculum-tools/population-health/zimmerman.html>
 18. **Asiri A (2015):** Client Client Education Plan for Improving Diabetes Management during Primary Health Care in Saudi Arabia. *Austin J Nurs Health Care*,2(2): 1018.