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Research Article

**LEVEL OF AWARENESS REGARDING  
HYPERCHOLESTEROLEMIA, SAUDI ARABIA, RIYADH, 2017**  
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Zaid Alanazi<sup>2</sup>, Dr. Ammar Khalifa<sup>3</sup><sup>1</sup>Medical Student of Almaarefa University.<sup>2</sup>Medical Students of Almaarefa University.<sup>3</sup>Assistant Professor, College of Medicine, Almaarefa University, Riyadh, Saudi Arabia.**Abstract:**

**Background:** There is a high prevalence of dyslipidemia in the Arabian Gulf. There is a gradual increase in Total Cholesterol Concentration (TCC) with age, reaching a maximum at the 50s and 60s for male subjects. Our study aims to assess hypercholesterolemia level awareness among Saudi People. **Methods:** cross-sectional. Study sample size was 150. Our sample technique was simple random. We included Saudi citizens of age 18 or above and we excluded medical personnel. Data collection tool was a self-administered questionnaire. We used Statistical Package for the Social Sciences (SPSS) to analyze our collected data. We considered P value less than 0.05 significant. **Results:** Level of awareness Regarding management of Hypercholesterolemia, our results showed that 25.33% of the participants had poor, 46.00% had moderate and 28.67% had good awareness. Regarding risk factors awareness of Hypercholesterolemia, our results showed that 44.00% of the participants had poor and moderate and 12.00% had good awareness. Regarding complications awareness of Hypercholesterolemia, our results showed that 24.00% of the participants had poor, 28.67% had moderate and 47.33% had good awareness. **conclusion:** the proportion of hypercholesterolemia among participant was one-fifth of the collected sample. Majority of them had poor to moderate knowledge regarding awareness of Hypercholesterolemia.

**Key words:** Hypercholesterolemia; dyslipidemia; awareness; cardiovascular disease; Saudi Arabia**Corresponding author:****Moath Al-Qahtani,**

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**INTRODUCTION:**

Dyslipidemia has a causal role in the pathogenesis of CVD (1). It is an independent and modifiable risk factor. Studies showed that the prevalence of dyslipidemia has increased considerably during the last decade with the economic development and related lifestyle changes (2). Accordingly, the essential avoidance of Cardiovascular Disease by treating asymptomatic hypercholesterolemia represents a significant step in lowering coronary morbidity and mortality. While there have been numerous reviews on cholesterol modifying treatment in the essential avoidance of Chronic Heart Disease, the proof of lifestyle adjustment in cholesterol management is less well documented methodically (3).

The increase of cardiovascular disease related to the mortality rate in the middle east is one of the highest in the world. Some international studies have focused on the risk factor of Cardiovascular Disease, but others did address numerous risk factors (4). Many population studies have exposed that people are well aware of their blood pressure levels in many countries. On the other hand, cholesterol levels and the term of hypercholesterolemia is not well known by many people, although there has been a huge development in many countries over the last years (5). Previous study found that a significant deficit in the awareness of familial hypercholesterolemia among the physicians in Saudi Arabia (6). To our knowledge there are meagre information regarding level awareness about hypercholesterolemia. Our study Aims to assess level awareness regarding hypercholesterolemia among Saudi population, Riyadh.

**METHODOLOGY:**

Our study is cross-sectional study, conducted in December 2017. The sample size was 150 participants who are from Riyadh population, excluding below 18 years old, non-Saudi residents and medical personnel. Simple random is the technique used to choose participants. In this study, we used self-administered questionnaire about (identifying level of awareness regarding management, risk factors, complications and assessing management practices of hypercholesterolemia). The data collection was interviewer administered. Our questionnaire will be subjected to a probe to test validity and reliability

before being used in the study. The data were analyzed using (SPSS). We considered (P value less than 0.05) significant. Consent was taken before data collection emphasizing each participant's right to withdraw from the study at any point of time.

**RESULT:**

Table (1): shows that 13.3% of participants were female. Regarding participants ages, 48.7% of participants were between 18 and 35 years, 36 % were between 36 and 50, 14% were between 51 and 70, and the rest of them were more than 70 years old. Regarding participants' occupations, 56.7% of the participants were employed, 30.7% of them were unemployed, and the rest of them were self-employed. Regarding education level, 58% of them had university education level, 32% had secondary education level, 8% had primary education level and the rest of them were illiterate. Regarding residence of participants, 46.7% of them live in an owned villa, 12% of them live in a rented villa, 10.6% of them live in an owned apartment and the rest of them live in a rented apartment.

Table (2): showed that 25.33% of participants had a poor level of awareness regarding management of hypercholesterolemia, 46% of them had a moderate level of awareness regarding management of hypercholesterolemia and the rest of them had a good level of awareness regarding management of hypercholesterolemia.

Table (3): showed that 24% of participants had a poor level of awareness regarding complication of hypercholesterolemia, 28.67% of them had a moderate level of awareness regarding complication of hypercholesterolemia while the rest of them had a good level of awareness regarding complication of hypercholesterolemia.

Table (4) + graph (1): showed that 44% of participants had a poor level of awareness regarding risk factor of hypercholesterolemia, the same percentage of them had a moderate level of awareness regarding risk factor of hypercholesterolemia and the rest of them had a good level of awareness regarding risk factor of hypercholesterolemia.

Table1: Demographic data

Variable	Number	%
➤ Gender		
Male	130	86.7
Female	20	13.3
➤ Age		
18-35	73	48.7
36-50	54	36.0
51-70	21	14.0
More than 70	2	1.3
➤ Occupation		
Employed	85	56.7
Unemployed	46	30.7
Self-employed	19	12.6
➤ Education		
Illiterate	3	2.0
Primary	12	8.0
Secondary	48	32.0
University	87	58.0
➤ Residence		
Owned villa	70	46.7
Rented villa	18	12.0
Owned apartment	16	10.6
Rented apartment	46	30.7

N= 150

Table (2-A): level of awareness regarding management of hypercholesterolemia

Variable	Yes	no	I don't know
➤ Control of Hypercholesterolemia by exercising	121(80.7%)	3(2.0%)	26(17.3%)
➤ Is fast food a risk factor of hypercholesterolemia or not	112(74.7%)	5(3.3%)	33(22.0%)
➤ Is stress a risk factor of hypercholesterolemia or not	58(38.7%)	34(22.6%)	58(38.7%)

Table (2-B) : : level of awareness regarding management of hypercholesterolemia.

	Poor	Moderate	Good	Total
Number	38	69	43	150
%	25.33	46.00	28.67	100

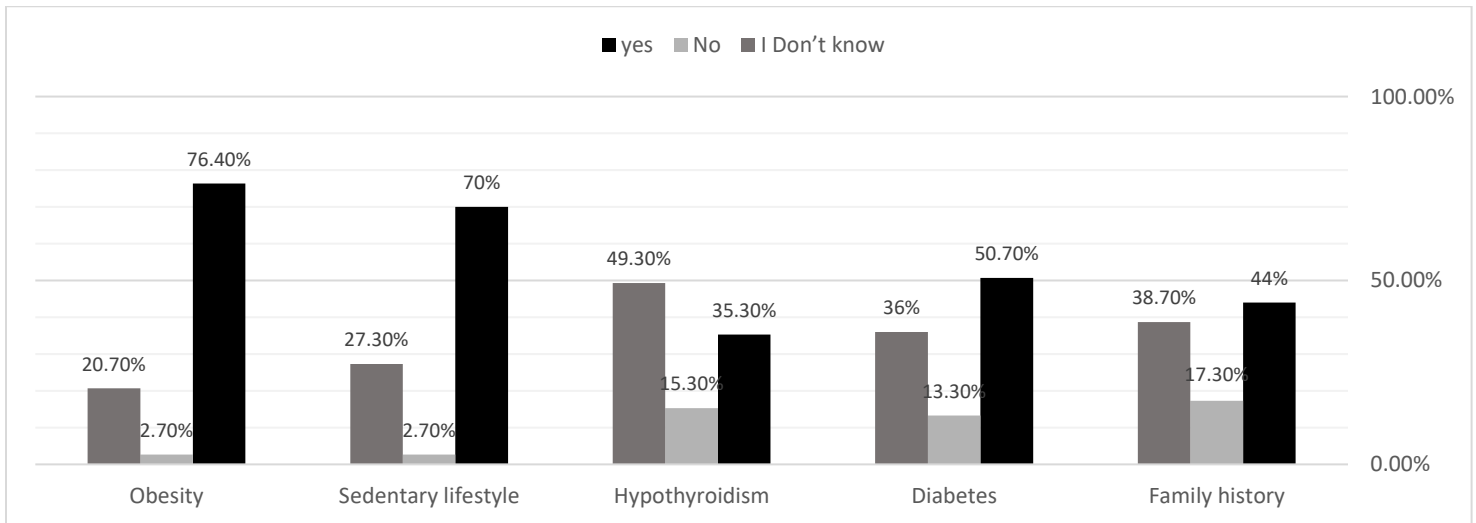
Table (3-A): the level of awareness regarding complications awareness that may occur due to hypercholesterolemia.

Variable	Yes	No	I Don't know
➤ Hypertension	97(64.7%)	16(10.6%)	37(24.7%)
➤ Heart attack	103(68.7%)	10(6.6%)	37(24.7%)
➤ Atherosclerosis	108(72.0%)	3(2.0%)	39(26.0%)
➤ Stroke	108(72.0%)	5(3.3%)	37(24.7%)

Table (3-B): the level of awareness regarding complications awareness that may occur due to hypercholesterolemia

	Poor	Moderate	Good	Total
Number	36	43	71	150
%	24.00	28.67	47.33	100

Graph (1):



Graph 1: The level of awareness regarding risk factors leading to hypercholesterolemia.

Table (4): The level of awareness regarding risk factors leading to hypercholesterolemia.

	Poor	Moderate	Good	Total
Number	66	66	18	150
%	44.00	44.00	12.00	100

**DISCUSSION:**

Our study aimed to measure the Riyadh Saudi citizens' level of awareness regarding hypercholesterolemia and their specific knowledge about management, risk factors and complications. In this study we found that the minority of participants have good level of awareness regarding management of hypercholesterolemia and the rest of them had poor to moderate knowledge, this goes in line with study conducted in 2013, Singapore, to assess level of awareness of cholesterol management in Singapore (7), it implies that Ministry of health should accelerate its efforts to improve the level of awareness regarding management of hypercholesterolemia by conducting educational programs targeting general population.

From our result the majority had a good level of awareness regarding complications of hypercholesterolemia and the rest of them had poor to moderate awareness. This result goes in contrary with a study conducted in 2017, Korea (8). Found that 44.6% of their male hypertensive and smoker participants were not even aware of their dyslipidemia while only 36% were aware. 5.2% of their female hypertensive and smoker participants were also not aware of their dyslipidemia while only 2.5% were aware. We believe that the good awareness of complications in Saudi Arabia due to the high prevalence of obesity, cardiovascular diseases among the population which makes the ministry of health increase the brochures about the complications to alter the patients form the developments of their disease.

Our study reveals that the minority had a good awareness of hypercholesterolemia regarding risk factors and the rest had poor to moderate awareness, this goes in line with a study conducted 2013, Italy (9). Our study had a limitation, 13.3% of the participants were female and this due to the difficulty accessing to them.

**CONCLUSION:**

In conclusion, majority of respondents had poor to moderate knowledge regarding awareness of hypercholesterolemia and the proportion of Hypercholesterolemia among participant was one-fifth of the collected sample. We recommend food and drug authority to increase brochures about the dangers and risks of hypercholesterolemia.

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