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A Cross Section Survey Assessment Study on the Knowledge and Practice of Periodic Medical Check up among the Saudi Population

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Abstract

In Saudi Arabia most of the individuals give very little attention to issues like health or no priority to medical checkup. This investigation was carried out to measure knowledge, practice of periodic medical checkup in Kingdom of Saudi Arabia people. A cross-sectional investigation was conducted among 1015 participants. A structured interviewer administered an online questionnaire were distribute by social media and whatsApp. We collected data and analyzed using SPSS version 21. Association between categorical variables were explored using bar chart and tables, Level of significance was set at 5%. The main age of the respondents was 21-30 years, 78.4% were females and 64.2% were married. About 42.1% have ever heard of periodic medical check-up , 57% of those who haven't ever heard of periodic medical checkup and only 21.9% among those who had ever done it had frequent medical check-up and 78.1% didn't do it. Attempt is required in ensuring that periodic medical check-up is urged. There is a need to study the factors associated with the uptake of medical check-up among the study population and effort should be made by health agencies to educate traders on the various types of medical check-up,

their indications and benefits as well as its practice encouraged

Introduction

Periodic Medical Check-up or Routine Medical Checkup (RMC) is a regular primary care process provided by health care facilities for all people of different ages through history taking and physical examination and laboratory investigation for non- complaining individuals. RMC is helpful and effective to discover new cases and prevent major complications to early intervention but also might be dangerous because all types of medical screening can cause harm. A well- known example is false-positive test can lead to more invasive diagnostic test. Also false-negative results may lead to a false sense of wellbeing and delay medical intervention when needed. And over-diagnosis can cause latent cancers or carcinoma in situ. (RMC) any variation in the health of individuals is observed and handled in the form of curative or preventive duties or follow–up. Many non-communicable diseases (NCD) as hypertension, breast cancer, cervical cancer, diabetes mellitus and prostate cancer. Currently ailments like obesity, atherosclerosis, myocardial infarctions and stroke, oncological disease can be detected [1]. It's necessary to conduct a periodic medical examination to reduce chronic diseases, because every year, 9 million people less than 60 years old die in the worldwide because of NCD [1]. In Kingdom of Saudi Arabia (KSA) the population suffers from high incidence of preventable chronic illness and most of them is top risk factor that's leads to death or disability [2-5] which have a burden that affects socially and economically and represents more than 60% of the global burden of disease. A comprehensive medical examination on a regular basis helps to prevent future illness [2]

General Aims

1-This study was aimed to assess the awareness of periodic medical check-up and practice among Saudi Arabia.

2- To evaluate the relation between the periodic medical check-up and reduce the incidence of health complication

Specific Aims

1- Know and analyze the main factors that leads to decrease commitment to periodic medical check-up [3,4]

Materials and Methods

A cross-sectional study was conducted in the Saudi community used to assess the awareness of periodic medical checks-up among Saudi and Non-Saudi people. The total number of participants was 1015 of both gender and the age was arranged into different stages. Data collection sources were given an online survey in the Arabic language and we were distribute the online questioner by social media platform and email. On the first page of survey link, it included brief information about our Research and confirmed to participant all the information keeps it confidential and anonymity were ensured all participants participated voluntarily. After completed the survey we translated to English language to the questionnaire was multiple choice and included two sections. First section contained socio demographic data (Gender, age, marital status, educational level, occupations).

And second section was evaluate the knowledge of participants about RMC, (have you ever had routine checkup , do you regularly checkup , frequency of medical checkup, types of checkup known , causes of poor implementation of periodic medical checkup , any improvement during medical checkup ,any complications because lack of periodic medical checkup, is it helpful to discover early problem). And the research investigation was approved by IBN SINA NATIONAL COLLEGE. Institutional Human Ethics Committee (H-02-03062021), protocol identification number is 002SRC31052021. The study was carried out for 3 months 'in duration. Microsoft Excel and IBM SPSS20.00 was employed to analyze the collected data for the evaluation

Result and Discussion

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A total participant 1015 but we were received only 983 answers due to missing or skip response (n=32),we were replaced by the mean values in software SPSS.

Based on survey result the socio demographic characteristics of the participants were shown in Table 1. In age standard deviation was (1,618) and most of the participants were in age group 21-30 years (29.9%), then 41-50 years (23.3%), then 51-60 years (19.3%). Then group 31-40 years then group of age less than 20 years (10.3%) and least≥60years (6.1%). In gender standard deviation was (4.527%) and the number of females 796 (78.4%) were significantly higher than male 219 (21.6%). the marital status were mostly is married people (64.2%) then single people (27.3%), divorced (4.5%), widower (3.9 %). The education levels were most of participants were University education (65.9%), followed by secondary (23.3%), postgraduate (5.8%), intermediate (3.4%), elementary (1.1%) and lastly illiterate (0.4%). In the occupation part (31.4%) were unemployed, (22.4%) in educational sector , (15.75%) retired (11.9%) in private sector, (8.9%) Medical sector, others (6.3%), government sector (3.4%). When we asked about the chronic disease most of participants answered they did not have chronic disease.

In Table 2, About the frequency of periodic medical check-up most of participants did checkups every six months (46.9%) , the second largest participants did check-ups yearly (35.0%), only 81 (8.0%) had check-ups every two years, and the 103 (10.1%) of population didn't know when checkups. Then we asked about types of periodic medical check-up known the most of the participants know general examination 479 (47.7%), only 10 (1.0%) know visual checkup, the known check blood sugar were (4.2%) and know blood pressure check (1.7%), and know dental check (2.6%) the second largest participants know all the above checkups (43.4%). Causes of poor implantation of periodic medical check-up, most of the participants didn't get regular checkup because low socio-economic class 409 (40.3%) , the second largest participants cause far away (33%), only other cases (4.5%), the cause of lack primary health care (22.2%).

In Table 3, when we asked the participants about have you ever had a routine medical check-up (42.1%) choose yes (57.8%) choose No. Also When we asked the participants when periodic medical check-up is done we were find there was not a big difference between participants who choose they do routine check-up when they feel well (43.9%) and who choose doing it during illness (40.8%) some of participants choose other causes (15.2%). about the regularity of periodic medical check-up most of the participants don't regularly do medical check-up (78.1%) while (21.9%) do. Who choose they do routine check-up when they feel well (43.9%) and who choose doing it during illness (40.8%) some of participants choose other causes (15.2%) . about the regularity of periodic medical check-up Most of the participants don't regularly do medical check-up (78.1%) while (21.9%) do.

Most of participants choose (I am not a regular in my periodic medical check-up 71.6%)

The second largest participants choose yes. They notice improvement in their health level during regular check-up (22.0%), only (6.4%) choose No.

58% choose no they didn't notice any complications because of lack of commitment in periodic medical check-up and 41.7% choose yes.

Most of participants choose yes the periodic medical check-up help them to discover health problems early and treat them (61.0%). 39.0% and other group of people choose no.

We asked about the improvement during regular periodic medical check-up Most of participants choose (I am not a regular in my periodic medical check-up 71.6%) the second largest participants choose yes. They notice improvement in their health level during regular check-up (22.0%), only (6.4%) choose No. about the complication due to lack of periodic medical check-up 58% choose no, they didn't notice any complications because of lack of

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Table 1. Socio demographic characteristics of the participant

Characteristic	Value/ Total	%
Age		
21-30 yr	253	24.9
Less than 20 yr	105	10.3
31-40 yr	163	16.1
41-50 yr	236	23.3
51-60 yr	196	19.3
More than 60 yr	62	6.1
Gender		
Female	796	78.4
Male	219	21.6
Marital status		
Single	277	27.3
Married	652	64.2
Widower	40	3.9
Divorced	46	4.5
Educational level		
Illiterate	4	0.4
Elementary	11	1.1
Intermediate	35	3.4
Secondary	237	23.3
University	669	65.9
Postgraduate	59	5.8
Occupations		
Unemployed	319	31.4
Retired	159	15.75
Private	121	11.9
Educational sector	227	22.4
Medical sector	90	8.9
Government sector	35	3.4
Others	64	6.3

Table 2. Frequency of periodic medical check-up

Characteristic	Value/ Total	%
Frequency of Medical check up		
Every 6 months	476	46.9
Yearly	355	35
Every 2 years	81	8
I don't know	103	10.1
Total	1015	100
Types of Periodic Medical check up		
General examination	479	47.2
Blood pressure	17	1.7
Blood sugar	43	4.2
Visual	10	1
Dental	25	2.5
All above	441	43.4
Causes of poor Implantation Periodic Medical check up		
Lack primary health care	225	22.2
Low socio-economic class	409	40.3
Far away	335	33
Other causes	46	4.5

Table 3. Frequency of periodic medical check-up

Questions	Value / %
Have you ever had a routine Medical check-up ? (n=1015)	
Yes	428 (42.1)
No	587 (57.8)
When Periodic Medical check-up is done?	
When one is healthy	447 (43.9)
During illness	414 (40.8)
Others	154 (15.2)
Do you regularly check-up ?	
Yes	223 (21.9)
No	792 (78.1)

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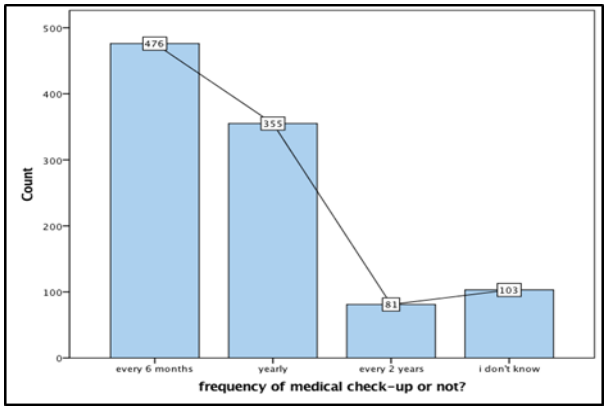

Figure 1. Frequency of Medical check-up or not?

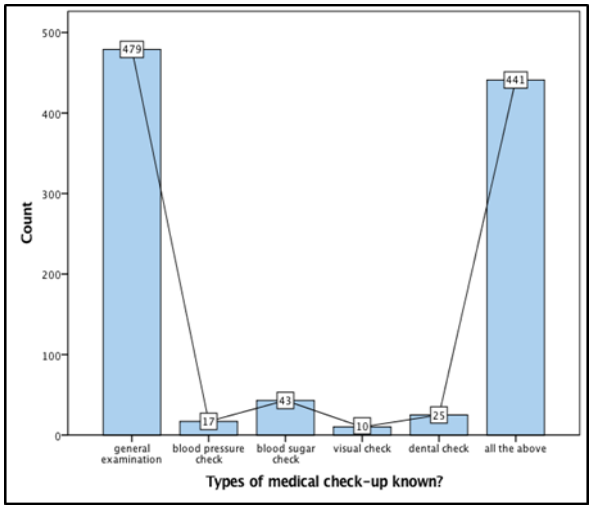

Figure 2. Types of medical check-up known

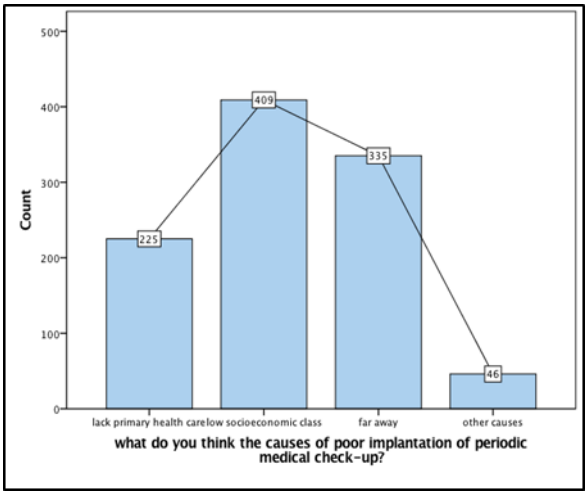

Figure 3. What do you think causes of poor implantation periodic medical check-up

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commitment in periodic medical check-up. And 41.7% choose yes. For, is it help to discover newly health problem, most of participants choose yes the periodic medical check-up help them to discover health problems early and treat them (61.0%) and 39.0% other group of people choose no. Fig 1-3

In KSA they found high rate of un-diagnostic and diagnostic chronic disease this study was planned to investigate the causes of low uptake of RMC and try to modify the causes among Saudi population (LOW –UPTAKE). [5-12]

Exposure to (RMC) and Age

Chi-square test was used to determine the relationship between age and exposure to a periodic medical checkup. Significant p-values was <0.001, there was no significant difference. The most frequent age group exposed to periodic medical checkups 41-50 years and 51-60 years then 21-30 years, 31-40 years, more than 60 years, less than 20 years and most frequent group not exposed to periodic medical checkup 21-30 years then 41-50 years, 51-60 years, 30-41 years, less than 20 years, more than 60 years.

Exposure (RMC) and Gender

Chi-square test used to determine the relationship between gender and exposure to periodic medical checkup. Significant p-values was 0.025 and <0.001 there was significant difference. Frequent distribution revealed most female exposed to periodic medical checkup than males.

Time of did (RMC) and Marital Status:

Chi-square test used to determine the relationship between marital status and time of did periodic medical checkup. Significant p-values was zero frequency distribution revealed most of married were visited hospital when one is healthy and the second largest group attempted to hospital when one is healthy single people, divorced, widower. Other married people (low rate) attempted to hospital only during illness, single people (larger than who attempt when one is healthy), divorced and widower.

Time of did (RMC) and Education

Chi-square test was used to determine the relationship between educations and time of did periodic medical checkup. Significant p-value was 0.668 <0.001 there was no significant difference. According to frequency distribution most of participant who university education visit hospital when one is healthy and others university educated choose only during illness, and few of them choose in other cases and about secondary education only visit hospital in case of illness. Others choose when one is healthy. Few of them choose in others cases. About postgraduate participants most of them when one is healthy and others postgraduate choose only during illness and few of them choose in other cases.

Regularity on (RMC) and Occupations

Chi-square test was used to determine the relationship between occupations and regularity on (RMC) significant p-value was 0.002 <0.001 there was significant difference, frequency distribution revealed most of participants answered not regular on (RMC) they were unemployed then educational sector, retired, private sector, medical sector. Others occupations and lastly government sector.

The few of participant who visit the hospital to (RMC) on regular were from unemployed then educational sector, retired, private sector, medical sector, sector government sector and last group from other occupations.

Results of chi-square test between routine medical check-up and types of medical check-up known showed that there is no statistically significant; since chi square had p-value 0.655>0.05 And results of chi-square test between routine medical check-up and frequency of medical checkup or not showed that there is no statistically significant; since chi square had p-value 0.837>0.05 results of chi-square test between routine medical check-up and causes of poor implantation of periodic medical checkup showed that there is no

statistically significant; since chi square had p-value0.625>0.05.

Results of chi-square test between regularly medical check-up or not and frequency of medical checkup or not showed that there is no statistically significant; since chi square had p-value 0.093>0.05.

Results of chi-square test between regularly medical check-up or not and types of medical checkup known showed that there is statistically significant; since chi square had p-value 0.04<0.05.participants with regular checkup and types of medical checkup known the first large group revealed mostly general examinations the second group blood sugar check .

Results of chi-square test between regularly medical check-up or not and causes of poor implantation of periodic medical checkup showed that there is no statistically significant; since chi square had p-value 0.193>0.05.

Results of chi-square test between routine medical check-up and periodic medical check-up is done showed that there is statistically significant; since chi square had p-value 0.00<0.05

Frequency participants with ever had a routine medical checkup when periodic medical checkup is done revealed most when one is healthy and second largest group during illness.

Results of chi-square test between routine medical check-up and regular checkup showed that there is statistically significant; since chi square had p-value 0.00<0.05. Frequency participants with ever had a routine medical checkup high score level no regular medical check -up then participants with a low score level do regular check-up.

Results of chi-square test between periodic medical check-up and regular checkup showed that there is statistically significant; since chi square had p-value 0.00<0.05. Participants with periodic medical checkup and regular medical check-up is done revealed most regular is health and second largest group irregular during illness.

Results of chi-square test between frequency of medical check-up and causes of poor implantation of periodic check-up showed that there is statistically significant; since chi square had p-value 0.00<0.05. Participants with frequency of medical poor implantation of periodic check-up revealed most low socioeconomic class the second cause away.

Results of chi-square test between frequency of medical check-up and types of medical check-up showed that there is statistically significant; since chi square had p-value 0.00<0.05.

Participants with frequency of medical checkup mostly every six months second largest group participants with yearly and types of medical checkup know revealed most general examination then blood sugar check.

Results of chi-square test between causes of poor implantation of periodic medical check-up and types of medical checkup showed that there is statistically significant; since chi square had p-value 0.00<0.05.

Participants with causes of poor implantation of periodic medical checkup most cause low socio-economic class, second largest group participants with far away to hospital and the low rate cause lack of primary health care types of medical checkup know revealed most general examination than blood sugar check.

Chi-square test was used to determine the relationship between complications of lack of periodic medical check-up and when medical check-up is done significant p-values was 0.001 <0.05 there was no significant difference

Chi-square test used to determine the relationship between did you notice any improvment in your health level during the regular check-up? and do regularly check-up or not? Significant p-values was 0.395 and <0.05 there was no significant difference.

Chi-square test used to determine the relationship between did periodic examination help you to discover health problems? and do you regularly check-up significant p-value was 0.574.

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Chi-square test was used to determine the relationship between did periodic examination help you to discover health problems? and when medical check-up is done significant p-value was 0.721 >0.05 there was significant difference

Chi-square test was used to determine the relationship between complications of lack of periodic medical check-up? and do you regularly check-up significant p-value was 0.395 >0.05 there was significant difference.

Chi-square test was used to determine the relationship between complications of lack of periodic medical check-up? and have you ever had a routine medical check-up significant p-value was 0.0673 >0.05 there was significant difference.

Chi-square test used to determine the relationship between did you notice any improvement in your health level during the regular check-up? and have you ever had a routine medical check-up significant p-values was 0.001 and <0.05 there was no significant difference.

Chi-square test used to determine the relationship between did periodic examination help you to discover health problems? and have you ever had a routine medical

Check-up significant p-values was. 447 >0.05 there was significant difference

Chi-square test was used to determine the relationship between complications of lack of periodic medical check-up? and when the medical check-up is done? Significant p-value was 0.223 >0.05 there was significant difference.

Conclusion

In this study, periodic medical check-up is one of the most important tool of preventive medicine used to detect early diseases. An enormous response of more than 1000 was been achieved and a sample of 1015 was studied using the chi-test to calculate the p-value and an average significance of 0.5% was achieved. The most active participation was observed from the age group (21-30 years) and female participants outnumbered the male. The highly prevalence of low uptake of the periodic medical check-up despite high level of awareness (RMC) among Saudi population as its highly associated with low socio-economic class and far away. We recommended increase number of primary care to use periodic medical check-up and identify the disease and prevent complication. This study also shows that it is highly essential to recommend for conducting campaign in schools and universities and other activities as an annual medical check-ups camps. The early detection of any disease can serve as a boon in controlling many diseases at its acute early stages rather than leading to the chronic life threatening diseases. This, study thus suggests the need of conducting the routine medical check-ups to eliminate the adverse life threatening complications due to many diseases. Though, the awareness among the community regarding the periodic medical check-up is excellent but the need for the practical implementation is lacking and the studies similar to this needs to be conducted on regular basis to analyze the developments in the future.

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Conflict of Interest

No conflict of interest.

Contribution of Authors

All authors have made substantial contribution to the work and approved it for publication.

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