

Prevalence of People That Using Multivitamins Supplementation & Experiencing A Side Effect in Saudi Arabia

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ABSTRACT

Introduction: multivitamins are normally used to treat vitamin deficiencies. They may cause constipation and diarrhea. We are concerned to see the prevalence for using multivitamins supplementation & awareness of their side effects among Saudi people. **Methods:** we conducted a cross sectional study and data collected by distributing an electronic questionnaire from 6/3 to 15/8/2017 and approved by the King Faisal University in Alhass, SA. Both gender above 18 years were included and excluded people below them. Statistical analyses were performed using SPSS. **Results:** this study was applied on 471 persons from different areas of Kingdom of Saudi Arabia. Most of them were female 67.5 %. the age of our studied group was above 18 years. Most of them was healthy, pre-university, from western area and used multivitamins for weight gain. 15.5% had harmful effect and 69.6% had vitamins or minerals deficiency (51.7% iron deficiency). 43.1% used them with no prescription and 85% used as pill. 80.8% considers them are important to their health and 35.8% believe there is no difference between using vitamins with or without medical advice. 24.9% believe they have no side effects and 16.3% believe that they are sufficient for the variety and quantity of food. 70.7% believe that the amount of vitamins in the food is not sufficient for the daily body and 42.5% read about vitamins from scientific books.

Conclusion: the majority of the participants were using vitamins according to medical advice and there is a less percentage of people that experienced a side effect from using that supplementations.

Objectives: to determine the prevalence, reasons, source of information of multivitamins supplement uses, and their side effects.

Keywords: multivitamins, Saudi Arabia.

INTRODUCTION

Multivitamins are a combination of many different vitamins that are normally found in foods and other natural sources. Multivitamins are used to provide vitamins that are not taken in through the diet. Multivitamins are also used to treat vitamin deficiencies (lack of vitamins) caused by illness, pregnancy, poor nutrition, digestive disorders, and many other conditions. Many multivitamin products contain minerals such as calcium, iron, magnesium, potassium, and zinc⁽¹⁾.

Multivitamins can be in the form of tablets, capsules, powders or liquids⁽²⁾. Constipation, diarrhea, or upset stomach may occur. These effects are usually temporary and may disappear as your body adjusts to this medication⁽³⁾. Less serious side effects may include: headache, or unusual or unpleasant taste in your mouth.

Minerals (especially taken in large doses) can cause side effects such as tooth staining, increased urination, stomach bleeding, uneven heart rate, confusion, and muscle weakness or limp feeling. Signs of an allergic reaction: hives, difficulty breathing, swelling of your face, lips, tongue, or throat⁽⁴⁾. A descriptive cross-sectional study on 120 adult participants from the general public was

conducted. The participants were interviewed and information was collected in a predesigned structured questionnaire. The data was analyzed and expressed as counts and percentages. Of the 120 study participants, 66 were males and 54 were females. Results revealed that 68.33% (82) of the participants were users of multivitamin supplements. Out of the users, 69.5% (57) participants consumed on the advice of doctors, 18.2% (15) were self-prescribers while 12.1% (10) relied on advice of family or friends. Among the users, 70.96% considered such supplements to be helpful. Reasons quoted for self-medication use of multivitamins were multiple such as maintenance of general health (55%), to allay weakness or fatigue (20%), to improve appetite (15%) etc.

Majority of the participants were unaware regarding the correct indications for multivitamin supplementation. Regarding knowledge about the natural sources of these vitamins, as many as 76% showed ignorance⁽⁵⁾. Four hundred patients were interviewed during the period from July to September 2008, at the out-patient clinics, Aga Khan University Hospital, Karachi. A pre-tested and structured questionnaire was used to collect information. It consisted of questions regarding demographics, awareness of vitamin supplements

and its consumption, reasons for usage and its effects. The purpose of the study was explained and assurance of confidentiality was given. After obtaining written consent, eligible individuals were interviewed. Statistical package for the social sciences version 19.0 was used to analyze the data. The results revealed that 98% of the respondents were aware of vitamin supplements.

The most known vitamin was found to be vitamin c (16.9%) while vitamin k was the least well-known (0.4%). 51.8% of the respondents were unaware of the harmful effects of vitamin supplements. The results also showed that 84.8% of the study population had taken vitamin supplements, and 79% of the participants considered vitamin supplements to be helpful. Taking vitamin supplements as a compensation for the deficiencies in the body was the most frequently chosen answer (17.7%) as the reason for use of vitamin supplements. On the other hand, a majority of the population was unaware of the indications for use of vitamin supplements⁽⁶⁾.

A cross-sectional survey was carried out at Jordan University, Amman, Jordan from March to September 2005. The survey included 1187 students aged 17-28 years. A multistage stratified sampling technique was used to recruit the participants from different majors at Jordan University. A self-administered questionnaire containing questions on use of vitamin mineral supplement during the last year, demographic, and lifestyle characteristics was completed. Results: the overall prevalence of vitamin-mineral supplement use during the last year reported by students was 27.4% (males 22%, and females 30.2%). Vitamin mineral supplement use among university students was significantly associated with age, gender, family monthly income, smoking status, physical activity, vegetarian status, and body mass index.

The most frequently used supplements were multivitamins (10.4%) and multivitamins-multi minerals (10%). The most frequently given reason for supplement use was for treatment. The main frequently reported source of information was a physician (45.8%)⁽⁷⁾.

For that reason, we were concerned to investigate the prevalence for using multivitamins supplementation & awareness of their side effects among Saudi people in comparison to other citizens in different countries.

OBJECTIVES

To determine the prevalence, reasons, source of information of multivitamins supplement uses, and their side effects.

METHODS

We will conduct a cross sectional study using a questioner & it will be collected by study team from peoples living in kingdom of Saudi Arabia in 6/3/2017 to 15/8/2017 and was approved by the king Faisal University in Alhassa , kingdom of Saudi Arabia .

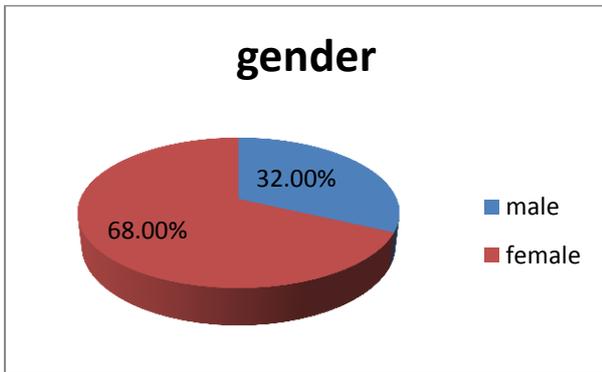
Mainly young adult people including both gender above 18 years old were included in the study. We excluded people below 18 years. Data was collected by distributing an electronic questionnaire containing (sex ,age , weight , region ,field of employment ,education level and questions about vitamins and its use). Statistical analyses were performed using SPSS.

The study was done according to the ethical board of King Abdulaziz university.

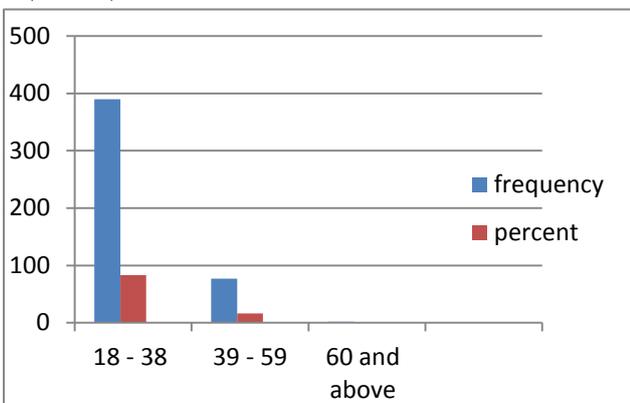
RESULTS

The aim of the study was to assess the awareness of community about side effects of multivitamins without medical counseling. This study was applied on (471) persons from different areas of kingdom of Saudi Arabia . Most of them were female 318 (67.5 %) and 152 (32.3%) were male (graph 1) . The age of the studied group was above 18 years (distribution of age is shown in graph 2). The weight of the studied group was 161(34.2%) between 53-68 kg , 123 (26.1%) between 69-84 kg , 96 (20.4%) less than 53 kg , 65 (13.8%) between 85-100kg and 25 (5.3%) more than 100 kg (graph 3) . The residency of studied group is shown in graph 4 . Most of our studied group came from western area 184(39.1%), 98 (20.8%) from eastern area, 98 (20.8%) from northern area, 65(13.8%) from central area, 25 (5.3%) from southern area .The jobs of the studied group is shown in table 1 . 191 (40.6%) were in medical field, 128 (27.2%) were in general work or business, 112 (23.8%) were in education field , 23 (4.9%) work in private field, 12 (2.5%) were in military field , 5 (1.1%) were unemployed . Education level of the studied group is shown in graph 5 . 343 (72.8%) were in pre university level , 127 (27%) were in university level . 354(75.2%) of our studied group were free from any disease , 116 (24.6%) were diseased (s) . Disease(s) is shown in graph 6 . 363 (77.1%) of our studied group used multivitamins, 103 (21.9%) were not using multivitamins (graph 7) . The way of prescribing multivitamins is shown in graph 8 , 158 (33.5%) were through medical prescription , 115 (24.4%) were prescribed by a pharmacist , 55 (11.7%) were prescribed through internet , 50 (10.6%) were prescribed through advertisements . 296 (62.8%) of our studied group committed the prescribed doses , 104 (22.1%) were not . The

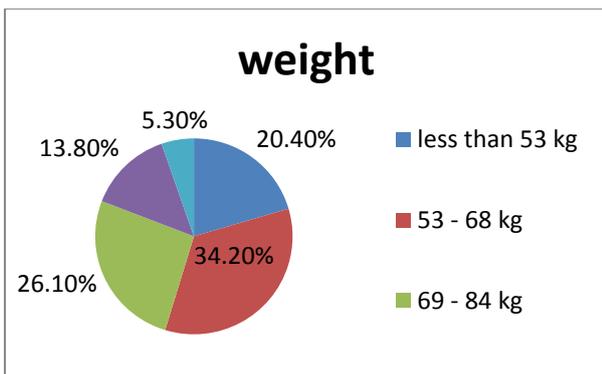
length of use of multivitamins is shown in graph 9 , 228 (48.4%) were using it for less than 3 months , 106 (22.5%)were using it for 3 to 9 months, 34 (7.2%) were using it for a period of more than one year , 16 (3.4%)were using it for a period between 9 months to one year . 265 (56.3%) of our studied group found benefit from using multivitamins , 117 (24.8%) were not, (graph 10) .the type of benefits from using multivitamins by our studied group is shown in graph 11 .110 (23.4%) experienced weight gain , 55 (11.7%) felt increase of their activity , 41(8.7%) were using them as a medication for their disease(s), 40 (8.5%) experienced an improvement of their immunity , 23 (4.9%) used it for body building .



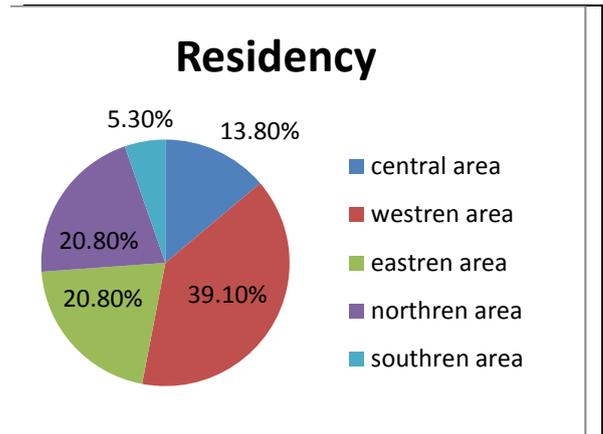
Graph 1: shows the gender distribution of the studied groups, 318(67.5%) were females and 152 (32.3%) were males.



Graph (2): show the age distribution of the studied group.



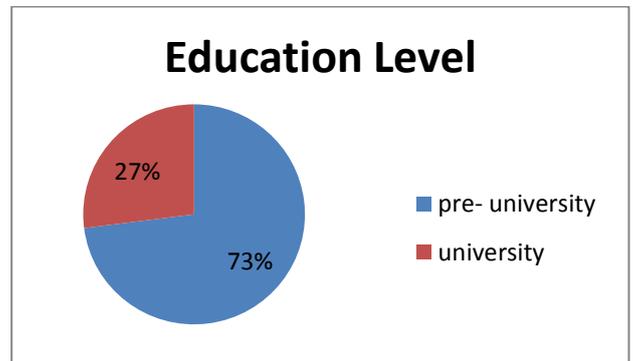
Graph 3: shows weight of the studied groups.



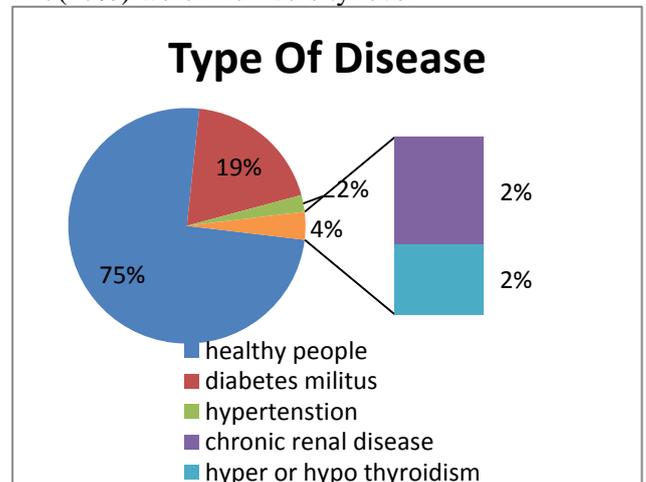
Graph (4): shows the residency of our studied groups

Table (1): shows the type of job of our studied groups

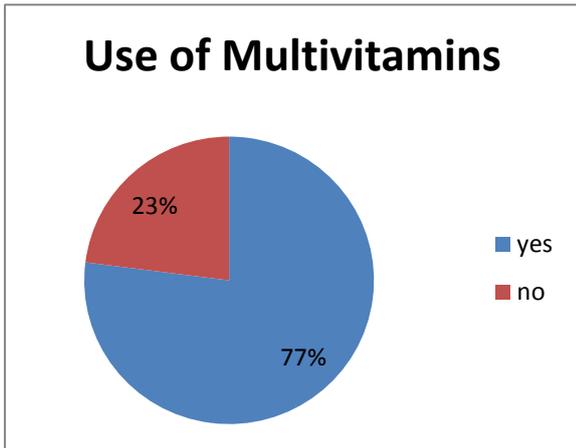
Type of job	Frequency	Percent
Education field	112	23.8
Medical field	191	40.6
Military field	12	2.5
Free work or business	128	27.2
Private field	23	4.9
Un employer	5	1.1



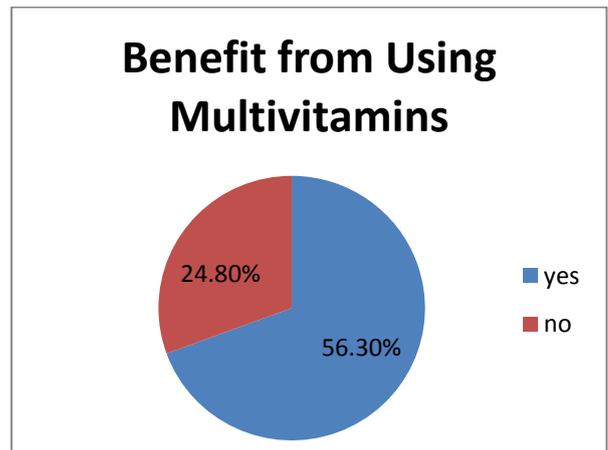
Graph (5): shows the education level of studied groups, 343 (72.8%) were in pre-university level , 127(27%) were in university level



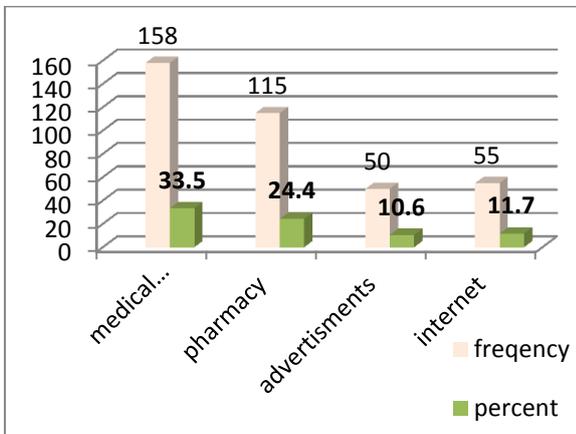
Graph (6): shows the types of diseases affect our studied groups



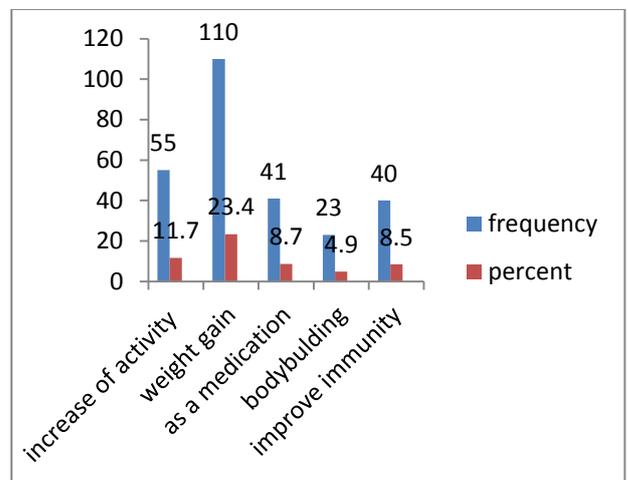
Graph (7): shows 363(77.1%) of our studied groups were used multivitamins , 103(21,9%) were not used multivitamins before .



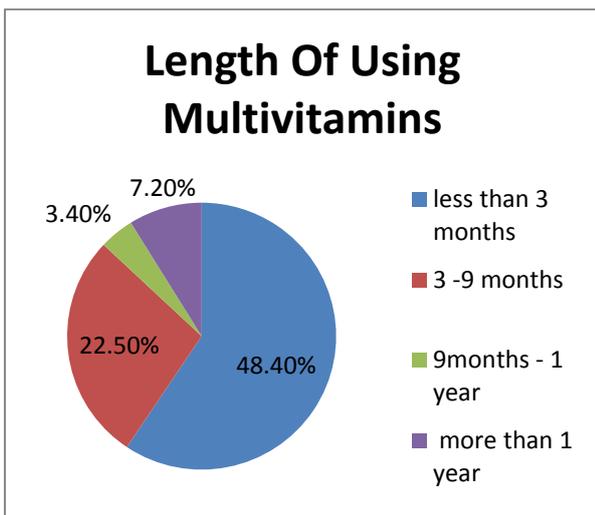
Graph (10): shows if the studied groups had been benefited from using multivitamins or not.



Graph (8): shows how our studied groups prescribe their multivitamins.



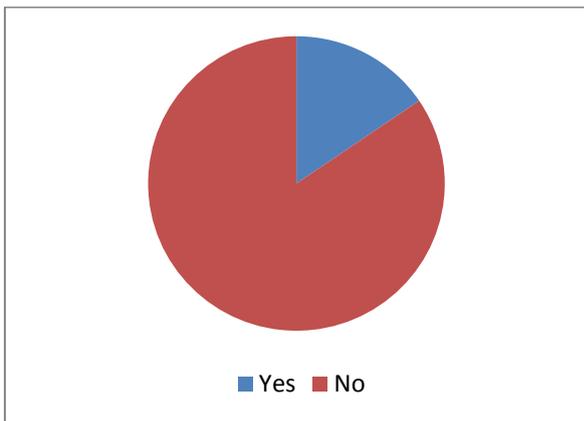
Graph (11): shows types of benefit from using multivitamins on our studied groups.



Graph (9): shows the length of using of multivitamins by our studied groups .



Graph (12): shows percent of the studied groups were having harm



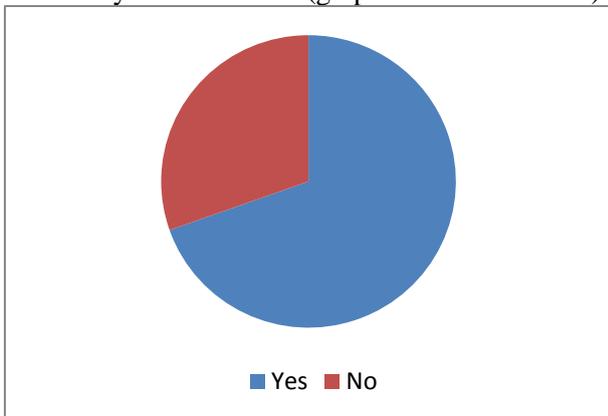
Graph 13 : shows the symptoms accompanied affected groups such as a headache, dizziness, nausea etc.

54.8 % (222) of the studied groups conducted an examination to determine the proportion of vitamins or minerals and 45.2% (183) of the studied group did not conduct an examination to determine the proportion of vitamins or minerals (graph 14).



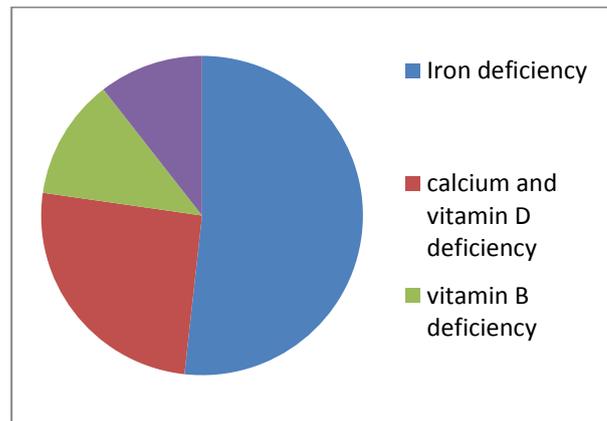
Graph 14: shows the proportion of the studied groups conducted an examination,

69.6% (284) of the studied group had vitamins or minerals deficiency and 30.4%(124) of the studied group had no vitamins or minerals deficiency (graph 15).



Graph 15: shows proportion of the studied group had vitamins or minerals deficiency.

51.7% (152) had iron deficiency , 25.5%(75) had calcium and vitamin D deficiency, 12.2% (36) had vitamin B deficiency and 10.5% (31) had deficiency in other minerals (graph 16).



Graph 16: shows proportion of deficiency.

56.9% (222) use the vitamins as prescribed by the doctor and 43.1% (168) with no prescription (graph 17).



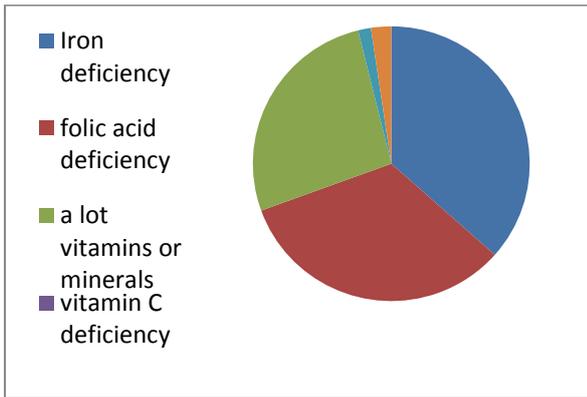
Graph 17: shows proportion of the users of vitamins as a prescribed by the doctor 79.7% (329) the studied group had vitamins or minerals deficiency in their family and 20.3% (84) had no (graph 18).



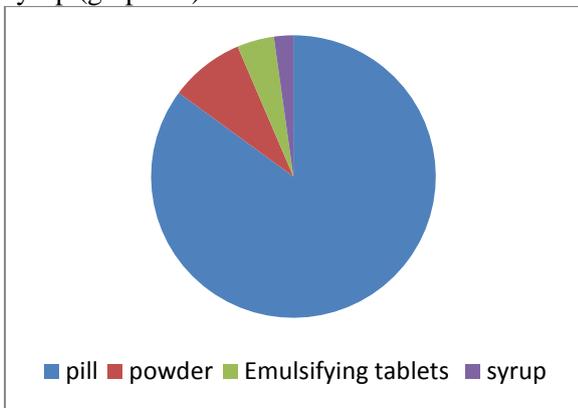
Graph 18 : shows proportion of the studied group having vitamins or minerals deficiency in their families.

34.1%(123) of the studied groups had vitamins or minerals deficiency in their families, 30.7% (111) had folic acid deficiency, 24.9%(90) had many vitamins or minerals deficiency , 6.6%(24) had vitamin c deficiency , 1.4% (5) had vitamin c? deficiency and 2.2%(8) had no deficiency (graph 19)

Prevalence of People That Using Multivitamins...

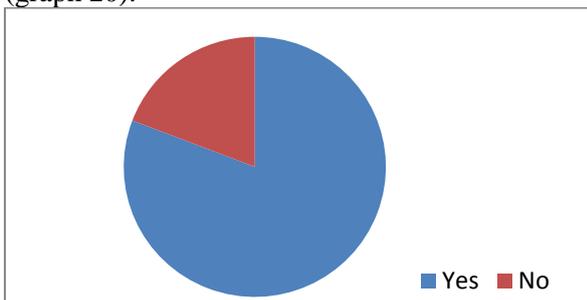


Graph 18 : shows the studied group had vitamins or minerals deficiency in their families 85% of the studied groups prefer to use vitamins as pill, 8.5% (34) prefer to use as a powder, 4.2%(17) as emulsifying tablets and 2.2% (9) syrup (graph 19)



Graph 19: shows types of preferable use of vitamins in the studied group

80.8% (329) of the studied group considered the vitamins or minerals are important to their body for strength and health, 19.2% (78) did not consider vitamins or minerals are important. (graph 20).



Graph 20 : shows proportion of the studied group who consider vitamins or minerals are important to their body.

35.8% (146) of the studied group believed that there is no difference between taking vitamins or minerals with or without medical advice and 64.2% (262) believed that there is difference between taking vitamins or minerals with or without medical advice (graph 21).



Graph 21: shows proportion of the studied group who believed that there is no difference between taking vitamins or minerals with or without medical advice

75.1%(308) of the studied group believed that vitamins and supplements have damaging and side effects and 24.9%(102) of the studied group believed that vitamins and supplements have no damaging or side effects (graph 22)



Graph 22 : shows proportion of the studied group who believed that vitamins and supplements have damaging or side effects

16.3%(67) the studied group believed that vitamins are sufficient for the variety and quantity of food and 83.7% (344) did not believe (graph 23).



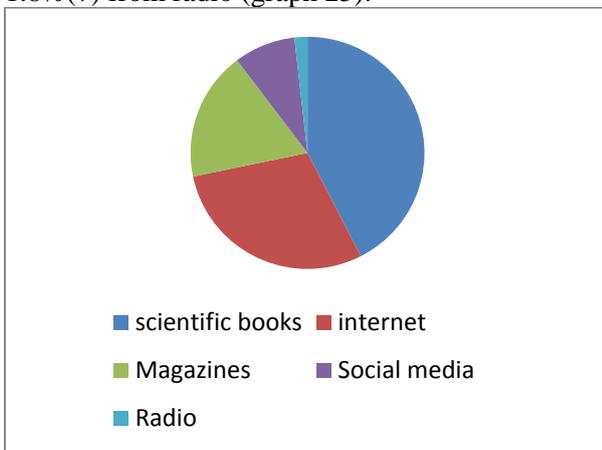
Graph 23: shows proportion of the studied group who believed that vitamins are sufficient for the variety and quantity of food.

29.3% (119) of the studied group who believed that the amount of vitamins in the food is sufficient daily for the body and 70.7%(287) of the studied group believed that the amount of vitamins in the food is not sufficient daily for the body (graph 24) .



Graph 24: shows proportion of the studied group who believed that the amount of vitamins in the food is sufficient daily for the body

42.5% (170) of the studied group read about vitamins and supplements from scientific books , 29.3% (117) from the internet , 18% (72) from magazines , 8.5% (34) from social media and 1.8% (7) from radio (graph 25).



Graph 25 : shows resources of the studied group about vitamins and supplements

DISCUSSION

Almost all of the study participants in the current study were aware of vitamin supplements and more than 33.5% had taken vitamin supplements due to medical prescription. This supports the basis of the study that vitamin supplements use is common. In our study, female participants (68%) outweighed the percentage of males (32%); this could be one of the reasons that the study found a high percentage of participants consuming vitamin supplements. Other studies have reported that females are more concerned about their health than their male counterparts as males tend to be the bread earners in our part of the world, and they generally have poor health seeking behavior.⁽¹⁾ Our study showed scientific book, internet & magazines to be the three most common sources of information regarding vitamin supplements. While a study in Karachi shows that the three most important sources are doctors, friends/relatives and media/newspaper ⁽¹⁾. Furthermore, the reasons reported for using vitamin supplements in the study by Leah et al⁽²⁾

were similar to the reasons reported in the current study, (i.e., to overcome deficiencies, improve general health and to replenish energy).

However, 24.9% of the study population declared that they were unaware of the harmful effects of vitamin supplements. Efficacy and safety studies of dietary supplements are limited and often methodologically poor⁽³⁾.

Patients interviewed in this study were subjected randomly through a questionnaire that was distributed in social media and in some general places; hence, the results cannot be generalized to the whole population. Nevertheless, this is the first such study to be conducted in Saudi Arabia and can form the basis for further studies and awareness programs regarding the safe and correct use of vitamin supplements.

This study has several limitations that need to be addressed. Since the study was a descriptive cross sectional study; the association or correlation between variables could not be studied. Secondly, most of the study participants were 73% pre university level, so their knowledge about vitamin supplementation might be different, this may have biased the study results. Thirdly, the harmful effects of vitamins were not specifically raised in the questionnaire.

CONCLUSION

Finding from this study suggests that multivitamin use is highly prevalent (77%) and the majority of the participants were using it according to medical advice. In light of this, there is a less percentage of people that experienced a side effect from using that supplementations.

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