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Multivitamin and Mineral Supplements Knowledge, Attitude, and Use in Iraq

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Abstract

Use of dietary supplements especially multivitamins is increasingly common in Iraq the study. The study aims to assess multivitamin supplement knowledge, attitude, and use in Iraqi people.

A cross-sectional study was conducted in Iraq, Baghdad. An electronic cross-sectional survey was conducted at the Iraqi population from first of July 2022 to the tenth of September 2022. About 533 persons participated in this study.

From total a 67.4% female with participant age ranging from 18 - ≥ 65 years 75.8% of them between 18-30 years old. Most of them were educated 88.9% finishing college. Moreover 61.4% were students, 79.9% took vitamin supplement in the past, 94.6% consider taking vitamins to be helpful for his health, 70.7% prescribed by physician, 50.5% knowing side effects or interactions of vitamin supplements, 46.9% take their supplement once daily in addition to 57% relied on the physician by taking vitamins or various nutritional supplements, 67.72% take it to compensate deficiency while 43.52% take it as health maintenance.

This survey highlights that the multivitamin supplements are commonly taken on a daily basis. Half of participants are unaware of any possible side effects or drug supplement interactions. Continued efforts should be encouraging to monitor multivitamins behavior and use to improve awareness of people regarding their correct use.

Keywords

Multivitamin, Mineral, Supplements, Knowledge, Attitude.

Introduction

A multivitamin is defined as a supplement containing three or more vitamins and minerals that does not include herbs, hormones, or drugs, where each vitamin and mineral is included at a dose below the tolerable upper level, as determined by the Food and Drug Agency and does not present a risk of adverse health effects (1). Since water-soluble vitamins cannot be hold on much within the body, they have to be taken frequently in enough quantities to fulfill the daily demand (2-3). They're additionally straightforward to expel from the body through the urine. Since fat-soluble vitamins are generally hold on in the liver, they are doing not cause vitamin deficiency symptoms though they are taken in lean amounts for a while, if they are taken in enlarged amounts later on. Urinary excretion of fat-soluble vitamins is mostly limited. Therefore, high-dose treatments with these vitamins carry a risk of toxicity. During pregnancy folic acid multivitamins contain calcium and vitamin D are vital to maintain both maternal and fetal health (4-8). The use of dietary supplements is not out of risk and adverse events may be encountered in the consumers. The inappropriate use of supplements can potentially cause adverse effects, such as for example an increased risk of bleeding from vitamin E overdose, the onset of ataxia, alopecia, hepatotoxicity and teratogenicity from chronic vitamin A overdose; moreover, important drug interactions can arise with certain drug classes such as between vitamin K and oral anticoagulants. Similarly, excess use of Multivitamin is also associated with adverse effects such as photosensitivity and neurotoxicity have been documented with the overdose of pyridoxine. Excess of vitamin A affects bone health and contributes to congenital abnormalities if used during pregnancy. The groups most susceptible to adverse effects those with weight loss, bodybuilding, and botanical supplements (9-12). the aim of the study to assess multivitamin supplement knowledge, attitude, and use in Iraqi people.

Materials &Methods

This cross-sectional study was conducted in Iraq, Baghdad. An electronic cross-sectional survey was conducted at the Iraqi population from first of July 2022 to the tenth of September 2022. The survey consisted of general open and closed end questions. Firs part was related to patients' demographics, the second part related to cause behind the supplements they take and knowledge, attitude, and use. The study protocol was approved by the local ethical committee of the Faculty of Pharmacy, Al-Rafidain University College in accordance with the internationally adopted guidelines and ethics of medical research. All analyses were conducted using IBM SPSS software (version 24.0).

Results

Of the 533-study participant, the majority of the participants were female 67.4% (359) and about 32.6% (174) were male. Nearly 75.8%(404) of them between 18-30 years old, 14.1% (75) between 31-44, 9.2% (49) were aged between 45-64 and those aged over 65 was 0.9% (5). Regarding their education, 2.1% (11) finished primary school, 8.8% (47) finished secondary school and 88.9% (475) finished college. Regarding their marital status, 71.7% (382 of participants were single, 26.3% (140) were married and 2.1% (11) were widow or separated. For their occupation, 61.4% (327) of the participants were students, 22.7% (121) were government employee,

5.6% (30) were private sector employee and 10.3% (55) were unemployed. (Table 1)

Table1. Demographics of survey participants, n= 533

Parameter		N (%)
Gender	Female	359 (67.4%)
	Male	174 (32.6%)
Age (years)	18-30	404 (75.8%)
	31-44	75 (14.1%)
	45-64	49 (9.2%)
	65 <=	5 (0.9%)
Education	Primary school	11 (2.1%)
	Secondary school	47 (8.8%)
	Graduated	475 (88.9%)
Marital status	Single	382 (71.7%)
	Married	140 (26.3%)
	Widow or separated	11 (2.1%)
Occupation	Student	327 (61.4%)
	Government employee	121 (22.7%)
	Private sector employee	30 (5.6%)
	Unemployed	55 (10.3%)

Regarding the knowledge, attitudes and use of supplement, about 79.9% (426) of the participants had mentioned that they took vitamin supplement in past, 94.6% (504) consider taking vitamins to be helpful for his health, 70.7% (377) mentioned that their physician recommended to take specific vitamin for his health, 50.5% (269) have knowledge regarding side-effects or interactions of vitamin supplements and 46.9% (250) take their supplement once daily. (Table 2)

Table 2. Multivitamin supplement knowledge, attitudes and use among participants

Variables		N (%)	
		Yes	**No**
Have you taken any vitamin supplement in past?		426 (79.9%)	107 (20.1%
Do you consider taking vitamins to be helpful for your health?		504 (94.6%)	29 (5.4%)
Has your physician recommended that you take specific vitamin for your health?		377 (70.7%)	156 (29.3%)
Do you have knowledge regarding side‐effects or interactions of vitamin supplements?		269 (50.5%)	264 (49.5%)
What is the frequency of usage of vitamin supplements by you?	**Once**	**Twice**	**Others**
	250 (46.9%)	27 (5.1%)	256 (48%)

The last part of the questionnaire showed that only 57% (304) of the total participants who participated in this questionnaire relied on the physician by taking vitamins or various nutritional supplements and 13.5% (72) of them relied on the dietary supplement label, while the other relied on internet 45.21% (241), family and friends 9.94% (53) and 17.26% (92) depend on other source of information like books while taking their supplements. High percent 67.72% (361) of participants take their supplement to Compensation, 43.52% (232) take it for Maintenance of general health, 20.26% (108) to allay fatigue, 7.87% (42) to improve appetite, 19.6% (105) for recovery from disease and only 9.3% (50) of all the participants were taking the supplement During pregnancy or lactation. (Table 3).

Discussion:

In the result of this study shows females consume higher amount of vitamins as compared to that of male the reason may be attributed to the need of vitamin D, Biotin, Folic acid, and pyridoxine for women more because of women's multivitamins are formulated to address the substantial shifts that happen in a woman's body at different life stages. From general maintenance of her skin & hair health, to menstruation with its resultant blood minerals deficiency & the role of multivitamins in controlling its irregularities to pregnancy for the health herself &her fetus finally perimenopause and post-menopause to prevent osteoporosis. This result match with other result done by Alwalan SI in Saudi populations (12).

Table 3. Sources of information and reasons for the practice of multivitamin supplements

		N (%)
Dependent	Physician	304 (57%)
	Dietary supplement label	72 (13.5%)
	Internet	241 (45.21%)
	Family & friends	53 (9.94%)
	Others (Books, etc ..)	92 (17.26%)
Cause behind their use	Maintenance of general health	232 (43.52%)
	Compensation for deficiencies	361 (67.72%)
	To allay fatigue	108 (20.26%)
	To improve appetite	42 (7.87%)
	For recovery from disease	105 (19.6%)
	During pregnancy or lactation	50 (9.3%)

Male 18.65% and female 81.4% Tayel DI in Egypt (14). (78.8 vs. 21.2%, respectively) in adition the same higher female usage of supplementation in Iraqi female noticed by Wael W. Mustafa (15) and Sami S. Shihab (16).

This study shows that most of the age groups take vitamins are between 18-30 years and most of them are students additionally increasing the consumption of vitamin in people with higher level of education, this is because increase in the income, educational level, and socioeconomic status of individuals increase their ability to meet the costs involved.

Perhaps the main reason for adult groups and students to use vitamins is lifestyle, for example the need of people demands for fast food that's easily and quickly accessible is an urgent requirement because of time limitations.

High level of anxiety and stress during exams and less sleep hours lead students to consume multivitamin more to enhance their sleep habits and decrease depression.

This result Likewise these studies done by Alwalan SI in Saudi populations 18 to <29 years (41.5%) consume multivitamin Opposite to the studies done by Tayel DI in Egypt. Consume more multivitamin, we thing this is because of limitations of our studies (older people don't have google accounts or one of the family members have an account and the google form accepts one response only).

Most of sample of the study were single this may be related to their age that does not qualify them to marry and may be related of the difficult economic situation to cover the

costs of marriage too since most of sample in this study the age range 18-30years old.

In opposite of studies done by Alwalan SI in Saudi Populations Most people who take multivitamin (60.3%) are married since the economy of Saudi Arabia is the largest in the Middle East and the good income make marriage easy so the marriage in Younger people is more common there. The main source of information for patients about vitamins is from the doctor. This may be one of the most important characteristics that show that the side effects of vitamin deficiency clearly appeared on people and began to make them anxious, so they preferred to visit the doctor and take the full information from him. Followed by internet the people try to collect the largest possible amount of information about their health needed. Perhaps the main reasons are most of the low-income persons or those with limited salary as in this study since most of them were student found that easy to solve their health problem from network comparing to high salary requirement to visit a physician in addition their daily work or road problems, distance, may play a role (13). Also, people spend most of their time on phones and social media taking their general health information from it (17-18).

Conclusion:

This survey highlights that the multivitamin supplements are commonly taken on a daily basis. Half of participants are unaware of any possible side effects or drug supplement interactions. Continued efforts should be encouraging to monitor multivitamins behavior and use to improve awareness of people regarding their correct use.

Suggestions:

We hope to develop this study in the future and make it more benefit by consider (obesity question, exercise and smoking) because it affects multivitamin consumption, we want to solve some limitation in this study for example: elderly people take multivitamin but they don't have google account, we also want to put more details about type of vitamin and frequency of usage of vitamin.

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