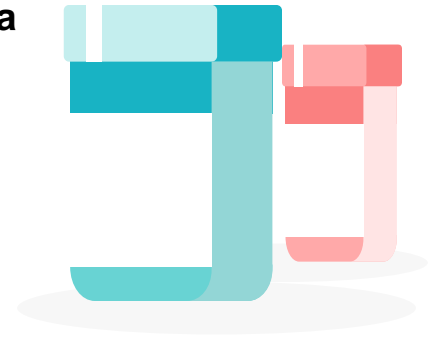




Dietary Supplements

Awareness among University Students in Basra





Dietary supplements (DS) includes minerals, vitamins and herbs. Multiple age groups broadly used them

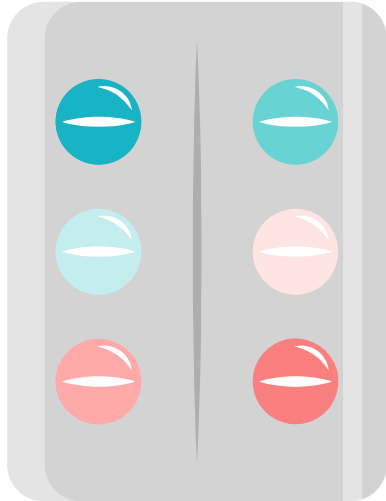


However, earlier studies reported numerous unsuitable uses of DS. Various mothers trust that nutritional supplements are suitable for children that are fussy eaters



Dietary Supplements

The common dietary supplements used in Basrah includes vitamins D, C, E and multivitamins. In addition to omega 3, calcium, iron, zinc, proteins and herbs



Females

Regarding the university students, females preferred nutritional supplements for reduction of weight

Males

while males mainly used proteins for muscles building

Constituents

DS having active ingredients such as vitamins, minerals

Numerous Substances

DS are dietary products can be bought from pharmacies and from other places like on-line stores or grocery shops

Prior tests

DS registration does not need prior tests regarding the effect of the active constituents on a living organism

DC vs Medicen

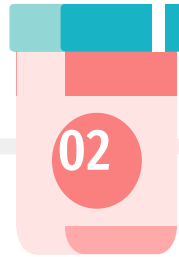
Several consumers do not know the difference between DS and medication

Therefore, the aim of this study was to determine the incidence of DS intake and the related factors among Basrah university students in Iraq.



Vitamin D

is required to maintain serum calcium concentration within the normal physiologic range for musculoskeletal health



Vitamin C

Promote iron absorption, It can protect from cancer and heart disease, healing of wounds.



Vitamin E

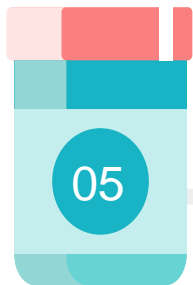
Vitamin E is an important vitamin that is required for the proper function of many organs in the body. It is also an anti-oxidant.



Omega 3

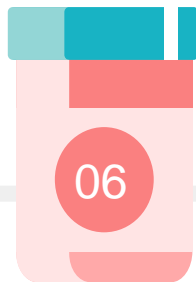
Thought to help reduce the risk of heart disease. They have been used along with diet and exercise to help lower levels of triglycerides and to raise

The aim of this study was to determine the incidence of DS intake and the related factors among Basrah university students in Iraq.



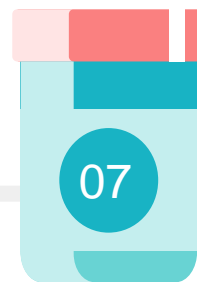
Calcium

Used to treat calcium deficiency conditions, such as hypocalcemic tetany, hypocalcemia related to hypoparathyroidism and hypocalcemia due to rapid growth or pregnancy.



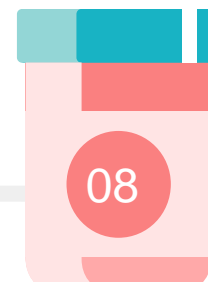
Iron

Used for preventing and treating anemia caused by low iron levels and anemia caused by chronic disease, pregnancy, or kidney problems



Zinc

Some people to help with the common cold or lung infections, malaria, or asthma use zinc. It may help with wound healing, ulcers, acne, and skin infections.



Multivitamin

Used to treat vitamin deficiencies caused by illness, pregnancy, poor nutrition, digestive disorders, and many other conditions.

Proteins :-Protein is an essential macronutrient that helps build muscle, repair tissue, and make enzymes and hormones. Using protein powder may also aid weight loss and help people tone their muscles.

Herbs:-Herbs used for flavoring and garnishing foods or for medicinal purposes.

**Other supplements:- Chromium
Magnesium , Glutamine**

Other supplements.....

Chromium

- can be used for weight loss, type 2 diabetes, high cholesterol, athletic performance enhancement, persistent depressive disorder, high blood glucose (hyperglycemia), low blood glucose (hypoglycemia) (reactive), low HDL cholesterol (beta-blocker related) and as a muscle mass builder.

Magnesium

- is most commonly used for constipation, as an antacid for heartburn, for low magnesium levels, for pregnancy complications called pre-eclampsia and eclampsia, and for a certain type of irregular heartbeat (torsades de pointes).

Glutamine

- is indicated for the treatment of Short Bowel Syndrome (SBS) in patients receiving specialized nutritional support when used in conjunction with a recombinant human growth hormone that is approved for this indication

Subjects and Methods

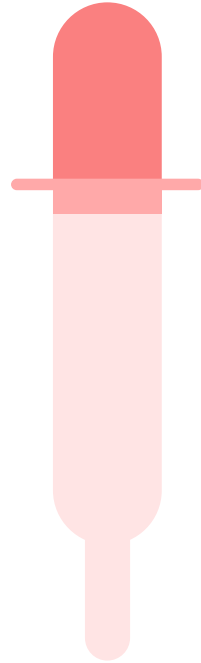
01

This study conducted by an anonymous questionnaire investigate DS intake among university students in Basrah aged 19 - 25 years. The study conducted online among 157 subjects. The mean age of the respondents was 22 ± 2.42 years, females constituted 61.2 % of all participants.

02

Statistics achieved using software called Graph Pad Prism (version 7.0, Inc., San Diego, CA). Descriptive statistics data presented as mean \pm SD for all parameters. Statistical comparisons between the two groups performed with student's *t*-test and the chi square. All *p* values <0.05 considered significantly different.

Results



A total of 157 students (61 males and 96 females) were participated in this study, all of them were received a questionnaire about the DS use. The study conducted online among 157 subjects. The mean age of the respondents was 22 ± 2.42 years, females constituted 61.2 % of all participants.

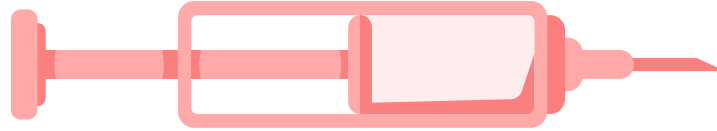
The results revealed that 111 student out of 157 are DS users, of which 41 were males and 20 were females, there was no significant different between the numbers of males and females in the DS users group.

Furthermore, 60 of DS users were from urban and 51 rural area. In addition to that, 52 of DS users were gym users, there was no significant difference according to residence area or gym uses in the DS users group

Table 2: Demographic characteristics of university student participants

Number (%)	Dietary supplement use		Total 157(100)	χ^2	P value
	yes 111 (70.7)	No 46 (29.3)			
Age (years)	22 ± 2.4	21 ± 2.3	22 ± 3		0.017*
BMI (kg.m ⁻²)	25.6 ± 4.1	26.4 ± 8.1	25.7 ± 7		0.41
Sex					
Male	41(36.9)	20 (43.5)	61 (38.9)	0.6	0.44
Female	70 (63.1)	26 (56.5)	96 (61.1)		
Residence area					
Urban	60 (54.0)	30 (65.2)	90 (57.3)	1.7	0.20
Rural	51 (46.0)	16 (34.8)	67 (42.7)		
Physical activity					
Yes	52 (46.9)	18 (39.1)	70 (44.6)	0.8	0.4
No	59 (53.1)	28 (60.9)	87 (55.4)		





Statistical comparisons between the two groups performed with student's *t* -test and the chi square. All *p* values <0.05 considered significantly different.

Moreover, the common DS used by university students in Basrah includes vitamins D, C, K and multivitamins. In addition to omega 3, calcium, iron, zinc, proteins and herbs.

Females use Vitamin D, iron and herbs more than males ($P = 0.0009, 0.003$ and 0.003) respectively. While males uses proteins more than females ($P < 0.0001$), as illustrated in table 3.

Table 3: The use of dietary supplements among males and females university students in Basrah.

Supplements Number (%)	Males 61 (38.9)	Females 96 (61.2)	Total 157 (100)	χ^2	P value
Vitamin D	2 (3.28)	22 (22.9)	24 (15.3)	11.11	0.0009*
Vitamin C	2 (3.28)	13 (13.5)	25 (15.9)	4.55	0.033
Omega 3	2 (3.28)	3 (3.1)	5 (3.2)	0.003	0.96
Calcium	0	1 (1.04)	1 (0.6)	0.64	0.42
Iron	0	13 (13.5)	13 (8.3)	9.00	0.003*
Zinc	3 (4.9)	9 (9.4)	12 (7.6)	1.1	0.31
Multivitamin	12 (19.7)	27 (28.1)	39 (24.8)	1.4	0.23
Vitamin K	0	3 (3.1)	3 (1.9)	1.94	0.16
Proteins	28 (45.9)	2 (2.1)	30 (19.1)	46.3	< 0.0001*
Herbs	4 (6.6)	24 (25)	28 (17.8)	8.66	0.003*



Discussion

The aim of this study was to determine the incidence of dietary supplements Intake and the related factors among Basrah university students in Iraq. We met Information on the types and number of supplements consumed by university students in Basrah, in addition to when and why these supplements used.

Awareness about dietary supplements has been widely studied in numerous populations and subgroups; it was studied on athletes [9], healthcare professionals [10] and medical students [11].

Discussion

Our research conducted using questionnaire, greater than half of the respondents were females (61.2%). The results revealed that there was no significant difference between the numbers of males and females in the DS users group. About 80 % of the respondents had a regular BMI and 55.4 % of the studied group stated that they did not use a gym.

The common DS used by university students in Basrah includes vitamins D, C, K and multivitamins. In addition to omega 3, calcium, iron, zinc, proteins and herbs. Females use vitamin D, iron and herbs more than males. Females need iron to replace the iron they lose in menstrual period. Gender differences have been suggested for vitamin D status, with a higher rate of deficiency especially in postmenopausal women, increasing the risk of bone fractures and osteoporosis.

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