Needs Assessment and Reasons for Consuming Food Supplements for Body-Building and Weightlifting Athletes in Ardabil Province

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Abstract

Purpose: The purpose of this study is to assess the needs and causes of dietary supplements for bodybuilding and weightlifting athletes in Ardabil province.

Methods: The present study is a descriptive research that was performed as a survey, both qualitative and quantitative strategies were used. The statistical population of this study consists of 385 athletes in the field of bodybuilding and weightlifting in Ardabil province. The interviewees were selected using targeted sampling with the participation of 11 of the best respondents to the questions to achieve theoretical saturation. Then, using MAXQDA12 software, the data was coded and the code was used for the researcher-made questionnaire. The findings showed that most of the supplements consumed by athletes in the study were 95% protein V-concentrate, V-isole protein, casein protein, egg white protein, soy protein, amino protein, and branched-chain amino acids.

Results: According to the results, there is a significant difference in the frequency of need for creatine supplementation among bodybuilding and weightlifting athletes in Ardabil province and the need for creatine supplementation in weightlifting athletes is more than bodybuilding athletes
($P = 0.003$) (Meaning in other supplements). In other supplements, no significant difference was observed in the two disciplines ($P \leq 0.05$).

Conclusion: The most important reasons for consuming dietary supplements in the athletes in the study of consumption are increasing muscle volume, increasing muscle strength, muscle recovery, being antioxidant, reducing fatigue, and burning fat, respectively.

Keyword: Bodybuilding, Causes of Consumption, Dietary Supplements, Weightlifting

Introduction

In recent years, with the development of various sports sciences, there has been a significant growth in the sports supplement industry, and as a result, the motivation to use these supplements to improve health and improve the level of sports performance has increased. Today, the use of sports supplements has increased significantly and there are many reports on how, when to use, increase muscle mass and level of sports performance, and studies on the prevalence of sports supplement use among athletes show that on average 59% of athletes are prominent 43% of regular athletes use sports supplements (Khajvand, 2011). Supplements or energizers are substances prescribed by a doctor or sports specialist to improve performance or compensate for the lack of certain nutrients. Since there is not enough scientific evidence about the benefits of using these substances and most people expect to see unusual changes from them, these substances are prescribed in excess of the athlete's needs and their purpose is to enhance the athlete's performance due to their quasi-pharmacological effects.

Most research suggests that athletes are more exposed to energy, steroids and drugs than others, which is more common among strength athletes. Taking sports supplements is one of the most important topics in bodybuilding that should not be overlooked in any way, because a lot of misinformation about it is published in cyberspace and sites that you should be aware of them (Khajvand, 2011).

Every living organism has needs, the satisfaction of which is a condition for the survival and evolution of the organism (Fathi, 2013). The same is true of man. Every kind of conscious activity is ultimately directed towards satisfying needs, and the explanation and interpretation of needs in the realm of different sciences has been accompanied by different orientations (Babaei, 2012). Psychologists consider need to be a psychological phenomenon that originates within humans. (Fathi, 2013).

Needs assessment is one of the most important concepts in the field of social services and education. It is an analysis that identifies two polar states, the present state (where we are) and the ideal state (where we should be) (Al-Raaya, 2013). Need indicates the gap between the current situation and the desired situation, and needs assessment is the process of gathering information about the needs of individuals, groups, organizations and institutions and prioritizing them in order to provide the necessary ground for addressing these needs. Sports needs assessment is the process of collecting and analyzing information on sports needs expressed by individuals, groups and communities. The purpose of physical education is a branch of educational sciences, to provide various educational services to individuals, which is the first step in sports planning to provide sports and identify the needs of a community (Fathi, 2013).

Nutrition has always been on the minds of athletes since humans became involved in sports. With the advancement of the sciences of exercise physiology, metabolism, and nutrition, it has been proven that diet and nutritional intake affect the performance of athletes (Molinero, 2009). But the benefits of dietary supplements, as athletes themselves believe, have not been fully proven (McDowall, 2007). Nutritional supplements, also known as sports supplements, are substances used by athletes to alleviate athletes' nutritional deficiencies (e.g., iron deficiency), or to increase their athletic performance (e.g., creatine). Therefore, in practice, it can be said that dietary supplements are compounds that are normally found in the diet and do not have doping properties (Khorasani, 2014). Many athletes use sports

supplements for a variety of reasons, and figures in developed countries suggest that supplements are on the rise in the athlete community (Jeffrey, 2013). The Canadian sports champions at the Atlanta and Sydney Olympics, 69% and 74%, respectively, had a history of taking supplements for sports. Due to the growing popularity of supplements for athletes, the supplement manufacturing and sales industry has also enjoyed significant growth, with supplement sales in the United States reaching more than $ 17 billion a year (Rahim Nik, 1995).

Considering that athletes' nutritional needs are higher than normal people, and with increasing duration and intensity of physical activity, these needs also increase, meeting the metabolic needs of athletes during exercise or after recovery, in order to prepare the body for training meals. Next, you need to consume more nutrients (Askari, 2012). In some cases, it is difficult for such athletes to meet their energy needs, which sometimes reach more than 9,000 kcal per day, through normal nutrition, due to the large amount of food consumed or the short interval between training meals. Taking dietary supplements in these cases can be beneficial because they have the nutrients needed by athletes in smaller volumes (Sasan, 2013).

The most important reasons for taking supplements among athletes in Iran and other countries are increased muscle mass, athletic performance, immune function and health. In Kimio Vasimio (2009) research, inadequate nutrition and performance excellence; in Bran et al. (2009) research, health and performance enhancement; in Tian et al. (2009) research, energy generation, health and mass growth, Kubriner's (2009) study reported increased performance, and in Petrogeki et al.'s (2008) study on elite young athletes, increased strength, recovery, and lack of injury were among the causes of supplementation (Azizi, 2013). Amirsasan et al. (2011) in their study of the use of nutritional supplements among elite Iranian wrestlers as performance improvement as the main reason for supplementation by athletes (Azizi, 2013). In the face-to-face study of colleagues (2012) on 150 athletes in Tabriz, the main reason for taking nutritional supplements was mentioned as providing nutritional needs (Eshmatami, 2009). Azizi (2012) examining the prevalence of consumption and reasons for taking supplements in male rowers of the Iranian national team reported that the reason for taking supplements in rowers was an increase in speed (26%), strength (27%) and endurance (37%) (Azizi, 2013). Nutritional knowledge about supplements seems to be scarce among athletes around the world. In the study of Kargarfard et al. (2008), despite the prevalence of 32% of supplement consumption among athletes in Lorestan province, 86% of them reported their knowledge and knowledge about nutritional supplements and doping below average (Arazi, 2015).

In the present era, due to the increasing expansion of cyberspace and before that, the recognition of prominent figures in the world of sports, especially bodybuilders and weightlifters, many people have physically likened their lifestyles and bodies to foreign and national champions. And this nature has increased in our society today, both in men and women, and many athletes use different strategies to achieve results faster and better, even in national and international athletes, and the use of dietary supplements is one of the fastest ways to achieve success. At present, in all clubs, all athletes in the fields of bodybuilding, classical wind and physics are looking for competitions at the amateur level or use dietary supplements in some way for weight loss and obesity, and its prevalence is clearly visible in society today.

The important issue is how to prepare and the reasons for using these types of supplements. In recent years, we have seen widespread

publicity in pharmacies and pharmacies as licensed dietary supplements, and the availability of purchases has increased the use of these supplements. The lucrative sales of these supplements in recent years and the high number of organized athletes in bodybuilding and weightlifting have led to many companies today, in addition to being smuggled in large quantities, distributing dietary supplements at the pharmacy level.

In Iran, few studies have been done on the status of dietary supplements in athletes and most studies have examined the use of energizers. Gathering information about dietary supplements, how to sell, percentage of purchases of dietary supplements and updating the reasons for consuming dietary supplements, society, will provide reliable information for companies producing and importing these products, sports planners and health center managers. Considering the high volume of people interested in bodybuilding and weightlifting sports in Ardabil province and their tendency to consume dietary supplements, conducting research in the province regarding the reasons for consuming these dietary supplements among athletes and also assessing the needs of these items seems necessary. This study will be conducted with the aim of assessing the needs and reasons for consuming dietary supplements for bodybuilding and weightlifting athletes in Ardabil province.

Materials and Methods

The present study is a descriptive study that was conducted as a survey. In this research, both qualitative and quantitative strategies have been used. The statistical population of this study consists of all bodybuilding and weightlifting athletes in Ardabil province. Cochran's formula was used to determine the sample size and the sample size was 385 people. Multi-stage sampling method was used to select the sample units. In this section, first, using cluster sampling method, clusters were selected and then inside the clusters, athletes were selected by random sampling and answered the questionnaires. In the qualitative section and for interviews using purposive sampling, expert participants were selected until theoretical saturation was achieved.

In this research, to collect information on the theoretical foundations and literature of the subject, the library method has been used by reviewing domestic and foreign books, journals and articles extracted from reputable and related Internet sites and libraries of the country's universities. Measurement tools included interviews and questionnaires. Participants were selected for the interview using purposive sampling to provide the best answers to the research questions, and when the number of participants reached 11, theoretical saturation was achieved. Then, using MAXQDA12 software, the data were coded and the codes were used and a research questionnaire was created.

To determine the validity of the questionnaire, the content method was used, the questionnaire was presented to professors and sports management specialists and was approved by professors and sports management specialists. To determine the reliability of the instrument, using a pilot study, 30 athletes were selected and after completing the questionnaire and 15 days later, the questionnaire was redistributed among them. The correlation coefficient between the questions in the two performances was more than 0.75 in all cases, which indicates the reliability of the tool.

1. Selecting participants to be interviewed using targeted sampling
2. Conducting interviews and recording all stages of the interview
3. Transcribing all interviews.
4. Using MAXQDA12 software and performing open coding.

5. Achieving theoretical saturation in the interview and completing the open coding stage.
6. Designing a needs assessment questionnaire from the open code.
7. Content validity assessment.
8. Assessing the reliability of the questionnaire in a pilot study and ensuring its reliability.
9. Achieving accurate statistics of athletes from the General Department of Sports and Youth Affairs of Ardabil province.
10. Determining the sample size and sampling method.
11- Creating the questionnaire and distributing it among the sample members.
12. Collecting questionnaires and transferring data to SPSS24 software.
13. Consulting Ardabil Pharmacy Exchange to determine the price of items.
14. Data analysis.
15. Submitting a research report.

In order to organize, summarize the data and describe the sample sizes in this study, descriptive statistics such as frequency tables, mean, standard deviation were used. To evaluate the normality of the data distribution of each variable, skewness and kurtosis indices were used and to answer the research questions and test the hypotheses, binomial tests and one-sample t-test using SPSS software version 24 were used.

Results

According to Table 1 below, the amount of skewness and elongation for the variables related to the reason for taking dietary supplements in athletes is between 2- and +2. Therefore, the distribution of variables related to the reason for taking dietary supplements in research athletes is normal.

Table 1. Investigating the normality of the distribution of variables related to the cause of dietary supplements in athletes

Variable name	Mean	Standard deviation	Skewness	kurtosis
Reducing fatigue	3.82	0.83	-0.09	-0.77
Being an antioxidant	3.86	0.82	-0.31	-0.34
Blood supply and blood pumping	3.32	1.15	-0.28	-0.63
Energy supply	3.52	1.02	-0.38	-0.25
Increasing muscle volume	4.08	1.02	-1.07	0.67
Muscle recovery	4.01	0.85	-0.60	0.25
Tissue repair and maintenance	3.79	0.80	-0.37	-0.20
Increasing muscle strength	4.05	0.84	-0.66	0.16
Fat burning	3.78	0.93	-0.61	0.39
Cell health	3.81	0.92	-0.33	-0.57
Preventing muscle damage	3.76	0.89	-0.40	-0.20
Bone health	3.49	1.09	-0.34	-0.49
Improving sleep quality	3.56	1.05	-0.40	-0.33
Memory Improvement	2.69	1.29	0.33	-0.98
Increasing athletic performance	3.56	1.01	-0.38	-0.04
Body growth	3.82	0.86	-0.48	0.36
Nervous system focus	3.39	0.99	-0.11	-0.32
Increasing endurance	3.62	0.89	-0.25	-0.13
Improving heart health	3.76	0.99	-1.06	0.58

The data obtained from Table 2 using the binomial statistical test show that with 95% confidence that in the opinion of athletes, the concentrations of V-concentrate protein, V-isolated protein, casein protein, egg white protein, soy protein, amino protein, Branched-chain amino acids, multivitamins, pumps, weight gainers, Creatine, Glutamine, Arginine, caffeine, green tea extract, ginseng, L-carnitine, zinc, vitamin E, vitamin C, Fe, vitamin A, vitamin B12, Magnesium, Calcium are among the needs of athletes in the field of bodybuilding and weightlifting in Ardabil province, and the rest of the supplements in the table are not among the needs.

Table 2: The results of Binomial test for the supplements required by athletes in the field of bodybuilding and weightlifting in Ardabil province

No	Supplement name	Observed Pro		N		p.value
		No	Yes	No	Yes	
1	Concentrate Protein	37	63	143	242	0.001
2	Isolated Protein	29	71	111	274	0.001
3	Casein protein	84	16	322	63	0.001
4	Egg white protein	65	35	252	133	0.001
5	Soybean Soy Protein	29	71	113	272	0.001
6	Amino	31	69	120	265	0.001
7	Branched amino acids	61	39	236	149	0.001
8	Dipartic acid	94	6	361	24	0.006
9	Multi vitamin	38	62	146	239	0.001
10	Pomp	74	26	283	102	0.001
11	Weight Gainers	68	32	260	125	0.001
12	Gamma minobiotric acid	98	2	377	8	0.001
13	Zinc monometonin aspartate	91	9	350	35	0.311
14	Creatine	40	60	155	230	0.001
15	Glutamine	39	61	150	235	0.001
16	Beta-alanine	89	11	342	43	0.245
17	Losin	96	4	368	16	0.001
18	Hydroxybeta - methyl butyrate	95	5	363	21	0.001
19	Taurine	98	2	375	9	0.001
20	Ornitine alpha ketoglutrate	98	2	376	8	0.001
21	Alanin	96	4	368	17	0.001
22	Choline	100	0	384	1	0.001
23	De Ribose	98	2	378	7	0.001
24	Phosphatidylserine	98	2	377	8	0.001
25	Alpha keto isocaproic	99	1	384	4	0.001
26	Arginine	62	38	238	147	0.001
27	Tribulus terrestris	88	12	338	47	0.090
28	Adenosine triphosphate	93	7	359	26	0.017

29	Caffeine	63	37	242	143	0.001
30	Green tea extract	75	25	287	98	0.001
31	Citrulline malate	98	2	377	8	0.001
32	Coenzyme Q10	95	5	366	19	0.001
33	Rudiola Rosia	98	2	379	6	0.001
34	Cordyceps	100	0	384	1	0.001
35	Pirovat	98	2	376	9	0.001
36	Gensing	85	15	329	56	0.003
37	Chromium	97	3	373	12	0.001
38	Medium Chinese triglyceride	98	2	378	7	0.001
39	Fenugreek extract	94	6	362	23	0.001
40	Linoleic acid	8	2	316	69	0.001
41	Koleus Forskli	99	1	382	3	0.001
42	Sinfarin	99	1	380	5	0.001
43	Uhimbeh	97	3	374	11	0.001
44	Echinacea	98	2	378	7	0.001
45	Glucosamine Sulfate	92	8	353	32	0.154
46	Beta glucan	98	2	377	8	0.001
47	Chondroitin sulfate	99	1	381	4	0.001
48	Collostrom	99	1	380	5	0.001
49	Tiananmen	97	3	374	11	0.001
50	Complement ST. JOHN'S WORT	99	1	381	4	0.001
51	Triptopan	97	3	373	12	0.001
52	Melatonin	96	4	371	14	0.001
53	Kava Kava	98	2	379	6	0.001
54	Tyrosine	99	1	383	2	0.001
55	Christine	98	2	378	7	0.001
56	Zinc	82	18	317	68	0.001
57	Vitamin E	37	63	144	241	0.001
58	Lycopene	90	10	348	37	0.441
59	Vitamin C	36	64	137	248	0.001
60	Iron	65	35	251	134	0.001
61	Vitamin A	66	34	253	132	0.001
62	Vitamin B12	52	48	202	183	0.001
63	Magnesium	81	19	313	72	0.001
64	Lutein	91	9	350	35	0.311
65	Calsium	53	47	205	180	0.001

Is there a difference between the frequency of supplementation required by bodybuilding and weightlifting athletes in Ardabil province?

To test the above hypothesis, in each of the required supplements among athletes in the two disciplines of bodybuilding and fraternity weights, Fisher test was used and the results according to Table 3 showed that only in the frequency of need for creatine supplement among bodybuilding athletes and there is a significant difference in weightlifting in Ardabil province and the need for creatine supplement in weightlifters is more than bodybuilders ($p = 0.003$). In other supplements, no significant difference was observed in the two disciplines ($P \leq 0.05$).

Table 3: The frequency of use of various supplements required in athletes in the field of bodybuilding and weightlifting

Supplement	Consumption status	Bodybuilding (Percent) Number	Weightlifting (Percent) Number	p.value
Concentrate Protein	Yes	(62.7) 217	(64.1) 25	1.0
	No	(37.3) 129	(35.9) 14	
Isolated Protein	Yes	(69.9) 242	(82.1) 32	0.137
	No	(30.1) 104	(17.9) 7	
Casein protein	Yes	(16.5) 57	(16.4) 6	1.0
	No	(83.5) 289	(84.6) 33	
Egg white protein	Yes	(34.7) 120	(33.3) 13	1.0
	No	(65.3) 226	(67.7) 26	
Soybean Soy Protein	Yes	(69.4) 240	(82.1) 32	0.137
	No	(30.6) 106	(17.9) 7	
Amino	Yes	(69.1) 239	(66.7) 26	0.855
	No	(30.9) 107	(33.3) 13	
Branched amino acids	Yes	(38.7) 134	(38.5) 15	1.0
	No	(61.3) 212	(61.5) 24	
Multi vitamin	Yes	(63.3) 219	(51.3) 20	0.165
	No	(36.7) 127	(48.7) 19	
Pomp	Yes	(26.6) 92	(25.6) 10	1.0
	No	(73.4) 254	(74.4) 29	
Weight Gainers	Yes	(33.2) 115	(25.6) 10	0.373
	No	(66.8) 231	(74.4) 29	
Creatine	Yes	(57.2) 198	(82.1) 32	0.003
	No	(42.8) 148	(17.9) 7	
Glutamine	Yes	(61.8) 214	(53.8) 21	0.387
	No	(38.2) 132	(46.2) 18	
Arginine	Yes	(39.3) 136	(28.2) 11	0.224

	No	(60.7) 210	(71.8) 28	
Caffeine	Yes	(38.2) 132	(28.2) 11	0.294
	No	(61.8) 214	(71.8) 28	
Green tea extract	Yes	(26.3) 91	(17.9) 7	0.333
	No	(73.7) 255	(82.1) 32	
Gensing	Yes	(15.3) 53	(7.7) 3	0.240
	No	(84.7) 293	(92.3) 36	
El carnitin	Yes	(59.5) 206	(64.1) 25	0.610
	No	(40.5) 140	(35.9) 14	
Zinc	Yes	(18.2) 63	(12.8) 5	0.510
	No	(81.8) 283	(87.2) 34	
Vitamin E	Yes	(63.6) 220	(53.8) 21	0.295
	No	(36.4) 126	(46.2) 18	
Vitamin C	Yes	(63) 218	(76.9) 30	0.112
	No	(37) 128	(23.1) 9	
Iron	Yes	(36.1) 125	(23.1) 9	0.114
	No	(63.9) 221	76.9 30	
Vitamin A	Yes	(35.5) 123	(23.1) 9	0.154
	No	(64.5) 223	(76.9) 30	
Vitamin B12	Yes	(48) 166	(43.6) 17	0.617
	No	(52) 180	(56.4) 22	
Magnesium	Yes	(18.8) 65	(17.9) 7	1.0
	No	(81.2) 281	(82.1) 32	
Calcium	Yes	(46) 159	(53.8) 21	0.399
	No	(54) 187	(46.2) 18	

What is the annual cost of nutritional supplements needed by bodybuilding and weightlifting athletes in Ardabil province? The information obtained from Table 4 shows that the total amount of food supplements needed by bodybuilding and weightlifting athletes in Ardabil province is 287,973,449,400 Rials.

Table 4: The sum of food supplements costs required by athletes in the field of bodybuilding and weight-lifting in Ardabil province

No	Supplement	Average price (Rials)	Number of needs	Number of athletes	Sum (Rials)
1	Concentrate protein (g)	800	3000	3367	8.080.800.000
2	Isolate Protein (g)	3500	2560	3367	30.168.320.000
3	Casein protein (g)	2000	763	3367	5.138.042.000
4	Egg white protein (g)	1500	1287	3367	6.499.993.500
5	Soybean Soy Protein	1000	1287	3367	7.407.400.000
6	Amino (number)	14000	1175	3367	55.387.150.000
7	Branched amino acids (g)	9000	400	3367	12.121.200.000
8	Multivitamin (number)	5000	180	3367	3.030.300.000
9	Pump (hot)	11000	378	3367	13.999.986.000
10	Weight Gainers (g)	1600	1667	3367	8.980.462.400
11	Creatine (g)	5000	1668	3367	28.249.130.000
12	Glutamine (g)	10000	790	3367	26.599.300.000
13	Arginine (number)	28000	207	3367	19.515.132.000
14	Green tea extract (number)	3000	220	3367	2.222.220.000
15	Ginseng (number)	32000	18	3367	1.939.392.000
16	L-Carnitine (number)	20000	220	3367	14.814.800.000
17	Zinc (number)	3500	165	3367	1.944.442.500
18	Vitamin E (number)	11000	35	3367	1.296.295.000
19	Vitamin C (number(	10000	300	3367	10.101.000.000
20	Iron (number)	4000	100	3367	1.346.800.000
21	Vitamin A	22000	44	3367	3.259.256.000
22	Vitamin B 12	3000	125	3367	1.262.625.000
23	Magnesium	9000	145	3367	4.393.935.000
24	Calcium	2000	162	3367	1.090.908.000
25	Caffeine (number)	16000	355	3367	19.124.460.000
Total					287.973.449.400

What are the reasons for taking dietary supplements in bodybuilding and weightlifting athletes in Ardabil province?

According to Table 5, a one-sample t-test was used to examine this question and the results showed that except for the reason of memory enhancement, the mean of which was lower than the mean of the other variables, because they had a higher mean than the mean of the concept. According to athletes, they are one of the reasons for taking sports supplements.

Table 5: Comparison of mean variables of causes of dietary supplement consumption in athletes with conceptual mean

Status of variables Causes of dietary supplements in athletes (Conceptual Average = 3)						
Variables of causes of consumption	Mean	Standard deviation	Number	df	t	p.value
Reducing fatigue	3.82	0.83	385	384	19.39	0.001
Being an antioxidant	3.86	0.82	385	384	20.59	0.001
Blood supply and blood pumping	3.32	1.15	385	384	5.53	0.001
Energy supply	3.52	1.02	385	384	20.82	0.001
Increasing muscle volume	4.08	1.02	385	384	20.82	0.001
Muscle recovery	4.01	0.085	385	384	23.22	0.001
Tissue repair and maintenance	3.79	0.80	385	384	19.35	0.001
Increasing muscle strength	4.05	0.84	385	384	24.57	0.001
fat burning	3.78	0.93	385	384	16.47	0.001
Cell health	3.81	0.92	385	384	17.23	0.001
Preventing muscle damage	3.76	0.89	385	384	16.78	0.001
Bone health	3.49	1.09	385	384	8.84	0.001
Improving sleep quality	3.56	1.05	385	384	10.51	0.001
Memory Improvement	2.69	1.29	385	384	-4.69	0.001
Increasing athletic performance	3.56	1.01	385	384	11.02	0.001
Body growth	3.82	0.86	385	384	18.73	0.001
Nervous system focus	3.39	0.99	385	384	7.70	0.001
Increasing endurance	3.62	0.89	385	384	13.66	0.001
Improving heart health	3.76	0.99	385	384	15.09	0.001
Reducing pain	3.25	1.07	385	384	4.65	0.001
Improve mood	3.71	0.99	385	384	14.03	0.001
Creating peace	3.61	0.99	385	384	11.9	0.001
Reducing depression	3.86	0.86	385	384	19.70	0.001
Regulating blood pressure	3.33	1.16	385	384	5.68	0.001
Improving the aerobic system	3.37	0.92	385	384	7.86	0.001
Immune system	3.63	0.77	385	384	15.87	0.001
Increase in exercise volume	3.81	0.92	385	384	17.26	0.001
Helping hydrate the body	3.38	1.15	385	384	6.43	0.001
Increasing heat tolerance capacity	3.30	1.18	385	384	5.01	0.001
Decreasing appetite	3.50	0.97	385	384	10.09	0.001
Improving skin health	4.11	1.06	385	384	20.31	0.001
Increasing awareness	3.03	0.84	385	384	23.97	0.001
Reducing inflammation	3.85	0.81	385	384	20.62	0.001

Discussion

The purpose of this study is to assess the needs and causes of dietary supplements for bodybuilding and weightlifting athletes in Ardabil province. The present study seeks to investigate the causes of the use of dietary supplements in bodybuilding and weightlifting athletes in Ardabil province. In this study, the required dietary supplements, available prices and the difference between their use in bodybuilding and weightlifting athletes in Ardabil province are evaluated.

Most of the supplements consumed by athletes in the field of bodybuilding and weightlifting in Ardabil province in the research of the information obtained from Table 2 using

the binomial statistical test show that with 95% confidence, it can be said that in the opinion of athletes, supplements of protein V concentrate, protein V isolated, casein protein, egg white protein, soy protein, amino acids, branched-chain amino acids, multivitamins, pumps, weight gainers (gins), creatine, Glutamine, Arginine, caffeine, green tea extract, ginseng, L-carnitine, Zinc, vitamin E, vitamin C, Fe, vitamin A, vitamin B12, magnesium, calcium are among the needs of athletes in the field of bodybuilding and weightlifting in Ardabil province, and the rest of the supplements in the table are not needed. According to the results of Table 3, which shows that only in the frequency of creatine supplementation need there is a significant difference between bodybuilding and weightlifting athletes in Ardabil province and the need for creatine supplementation in weightlifters is more than bodybuilders (P=0.003) No significant difference was observed in the two strands in other supplements (P≥0.05). The information obtained from Table 4 shows that the total amount of food supplements needed by bodybuilding and weightlifting athletes in Ardabil province is 287,973,449,400 Rials. Findings of this study in Table 5 show that the most important reasons for taking dietary supplements in the athletes in this study are increasing muscle mass, increasing muscle strength, improving skin health, muscle recovery, being an antioxidant, reducing fatigue, and burning fat.

Conclusion

The findings of this study in Table 2 indicate the dietary supplements used by athletes in the fields of bodybuilding and weightlifting. Based on these findings, protein V isolate and amino acids are the main supplements consumed by these bodybuilders and creatine supplement is the main supplement consumed by weightlifters. These findings are also similar to the findings of the Petroleum Research. Of course, in the meantime, the concern about the lack of necessary knowledge about how and how much to take supplements remains strong.

The findings of this study on the reasons for taking supplements have yielded interesting results and in order of priority, increasing muscle mass, increasing muscle strength, muscle recovery have been mentioned as their reasons for taking supplements (Table 5). This finding is inconsistent with many previous studies that introduce changes in body composition and success in competition as the main reasons for taking supplements, and according to the focus on body needs in 35% of respondents, can be a positive sign of a change in the knowledge of the athletes being tested.

In Kimio and Simio (2009) research, insufficient nutrition and superiority in performance, in Bran et al. (2009) health and performance increase, in Tian et al. (2009) energy generation, health and increase in muscle mass, in Kubriner research. (2009) Increased performance and in the study of Petrogy et al. (2008) Increased strength, recovery and non-injury were among the reasons for supplement use that are somewhat consistent with the results of the present study. In most studies in this field, increasing performance and accelerating recovery were the main reasons for consuming carbohydrate supplements in athletes. Regarding the causes of supplementation, although some studies indicate the existence of sexual differences, but in most studies, weight gain and strength in men has been a major cause of supplementation, which does not agree with the results of the present study. Another reason for supplementation in athletes was performance improvement. This shows that athletes believe that their normal diet is not a good source of nutrition to maintain good health and athletic performance. According to the results obtained from the research of Amirsasan et al. (2011), the most important

reasons related to supplement consumption from the perspective of athletes is the improvement of athletic performance (62%). 54%), increased power (51%), and energy production (50%). Weight loss (4%), pain relief (8%) and body fat loss (99%) had the least role in supplementation.

In Kubriner (2009)'s study, performance enhancement and in Petrogeki et al.'s (2008) study on elite young athletes, increased strength, recovery and lack of injury were among the reasons for supplementation and were reported, which is somewhat consistent with the results of this study. Amirsasan et al. (2011) in the study of nutritional supplement consumption among elite Iranian wrestlers stated that performance improvement is the main reason for supplementation by athletes that does not correspond to the results of this study. In the face-to-face study of colleagues et al. (2012) on 150 athletes in Tabriz, the main reason for taking nutritional supplements was mentioned, which is not consistent with the present study. Azizi (2012) examining the prevalence of consumption and reasons for taking supplements in male rowers of the Iranian national team reported that the reason for taking supplements in rowers was an increase in speed (26%), strength (27%) and endurance (37%). The findings of this study are rejected.

References

1. Khajvand, N. (2011). Anabolic steroids and dietary supplements in exercise. 49(24), 95 – 80. (Persian).
2. Babaei, M. (2012). Basics of Information Needs Assessment, 12(4), 32-21. (Persian).
3. Fathi, Hajj K. (2013) Educational needs assessment, 35-22. (Persian).
4. Rahim Nik, A. (1995). Theory of Needs Motivation. Islamic Azad University. Tehran. (Persian).
5. Sasan, T. (2013). Frequency, Type, and Causes of Dietary Supplements in Iranian Athletes Participating in the 2012 London Olympics Based on Theory of Planned Behavior. Institute of Physical Education and Sport Science, Ministry of Science, Research and Technology. 21(4), 60-43. (Persian).
6. Azizi, M. (2013) Exploring the prevalence of consumption and the reasons for supplementation in male sailors of the Iranian national team - Sports Physiology 5(20), 53-62. (Persian).
7. Eshmatami, M. (2009) Psychic Right, M. Azerpira, Q. & Prevalence, A. Reasons for Use, and Sources of Information on Sport-Dietary Supplements in Athletes of Different Fields in Tabriz City, 8. (Persian).
8. Arazi, H., Zahed Abolhassani, M. & Baziar, F. (2015) A Study of Prevalence, Awareness, and Attitude Towards Negative Consequences. Sports Physiology, 9. (Persian).
9. Askari E. J., & Gleeson, M.S. (2012) Sport Nutrition Introduction to Energy Production and Sport Performance, translated by Hamid Mohebbi, Reza Nouri, Hadi Rouhani, Tehran, Hatami Publications, First Edition, 120-122. (Persian).
10. Al-Raaya, A., Berktin, M., & Atari, M. (2013) Educational Needs Assessment of Psychiatric Residents of Isfahan University of Medical Sciences about Suicide: A Qualitative Research. Iranian Journal of Psychiatry and Clinical Psychology, 8(2), 108-114. (Persian).
11. Fathi Hajj, K. (2013) Educational Needs Assessment of Patterns and Techniques, Tehran, Abiz Publishing, Ninth Edition, 24- 26. (Persian)
12. Khorasani, A., & Eid, A. (2014). Applied Educational Needs Assessment Techniques, Second Edition, Tehran, Iran Educational and Industrial Research Center Publications, 119-122. (Persian)

13. Jeffrey J, M. (2010). Behavior, Theory and Practice: Promoting Physical Activity among American College Students. A Dissertation Submitted to the Faculty of the Graduate School at the University of North Carolina at Greensboro, 70-73.
14. Volpe, SL. (2007). Micronutrient requirements for athletes. Clin Sports Med; 26(1), 119-30.
15. Jeukendrup, A. (2008). Carbohydrate feeding during exercise. Eur J Sport Sci, 89(2), 77-86.
16. Summers, Gene F., & etal. (1987). Needs Assessment. Lowa State University Press, 9.
17. Nutrition Business Journal. Supplement Business Report. (2016). New York, NY: Penton.
18. Kalra, E. K. (2003). Nutraceutical-definition and introduction. The AAPS Journal, 5(3), 27-28.
19. Homayounfar, R., Ehrampoush, E., Cheraghpour, M., Ghaemi, A. R., Atefi, M., Zand, H., & Davoodi, H. (2013). Nutritional ergogenic aids for Weight Loss and Performance Enhancement from myth to document. Iranian Journal of Nutrition Sciences & Food Technology, 7(5), 855-875.
20. Petróczi, A., Naughton, D. P., Pearce, G., Bailey, R., Bloodworth, A., & McNamee, M. (2008). Nutritional supplement use by elite young UK athletes: fallacies of advice regarding efficacy. Journal of the International Society of Sports Nutrition, 5(1), 22.