

## Sports Supplements: Prevalence and Attitude Among Athletes

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### Abstract

The purpose of this study was to examine the prevalence and attitude towards the use of sports supplements among athletes. One hundred and fifty (N = 150) athletes from Kerala were chosen for the study (100 male and 50 female). The participants ranged in age from 20 to 35. According to the findings of the study, out of the total of 150 participants, 66% of the male participants and 34% of the female participants were taking sports supplements. The majority of the study's subjects, both male and female, admitted to using sports supplements in order to boost their performance. The subjects' coaches were a good source of information regarding sports supplements, and it was found that the vast majority of the subjects consumed their supplements in powder form. Supplement use among young athletes is pervasive and does not discriminate on the basis of demographic characteristics or chosen field of competition. People take sports supplements for a variety of reasons, the most common of which is the belief that to improve their athletic performance. And they believe supplements are safe to use, which helps to improve mental health, make them healthier, and helps to prevent injury. The results found that there was no significant differences between male and female athletes on the statements *sports supplements improve concentration and supplements provide proper recovery*. As a result, it is crucial to provide athletes with ongoing education on the responsible use of sports supplements.

### Introduction

Sports supplements are substances taken to replace or enhance the athletic performance or health of an individual. Supplements occur in a variety of forms, ranging from the more traditional sports supplements like protein, amino acids, creatine, and so on to those used more broadly like vitamins, minerals, herbs, and botanicals (derived from a plant's roots, leaves, bark, or berries). Supplements helpful for athletes

who need to put on weight and vitamin deficiency. Some well-known supplements act as ergogenic aids, enhancing energy production and recovery. People take these supplements in order to maintain or improve their health and to make sure they are getting enough of the crucial nutrients they require.

Supplements may also be helpful for athletes who need to put on weight or address a known vitamin deficiency. Some well-known supplements act as

ergogenic aids, enhancing energy production and recovery. Among the most thoroughly studied substances are beta-alanine, creatine, caffeine, and protein. People take these supplements in order to maintain or improve their health and to make sure they are getting enough of the crucial nutrients they require. However, not everybody needs supplements.

There is a lot of research to support several supplements, but an even bigger number lacks sufficient evidence. Supplements, unlike medications, are not designed to treat, diagnose, prevent, or cure illness. Most sports supplements make some sort of promise to benefit athletes. However, studies indicate that just a small number of supplements actually help athletes.

The purpose of the study was to investigate the prevalence and attitudes towards use of sports supplements among young athletes in Kerala. The reason for the selected study is that, many studies have been conducted on supplements in many countries of the world, but very few studies have been conducted on the use of supplements by sports participating athletes in Kerala. Many studies shows that supplement use is now very common. So the purpose of this study is to investigate the most commonly used supplements among athletes in Kerala as well as their dosage and length of use. And the effects happen in their body, if any side effects happen in their body, and the reason for the bad effects; who gives the knowledge about the supplement's usages and dose is also investigate in this study. The study tries to reveal the prevalence and attitude towards the use of sports supplements, supplementation among young athletes in Kerala.

### Objectives of the study

1. To assess the prevalence of sports supplements among athletes.
2. To assess the attitude towards the supplements among athletes
3. To compare the attitude towards using supplements among male and female athletes.

### Methods

One hundred and fifty (N = 150) athletes from Kerala were chosen for the study (100 male and 50 female). The participants ranged between 20 to 35 years. The questionnaire was constructed with the help of numerous research experts, with the general structure of the questions adapted from earlier studies. The questionnaire was

constructed and organized in a logical manner to enable the respondent to provide accurate answers. Athletes from Kerala who used the supplements provided the information. In order to gather data, the researcher approached the subject personally and requested their participation in the study. The prevalence and attitudes towards sports supplements among male and female athletes were compared using descriptive statistics, percentage analysis, and chi-square.

### Results

The data of athlete's male and female were analyzed through percentage analysis and chi-square analysis.

**Table 1**  
**Frequencies and Percentages of Participants with respect to their Gender**

| Gender | F   | Percent |
|--------|-----|---------|
| Male   | 100 | 66      |
| Female | 50  | 34      |

The table revealed that of 150 sports participants, 66% of the male and 34% of the female sports participants were taking sports supplements.

### Prevalence of Supplements

**Table 2**  
**Frequencies and Percentages of Participants Commonly Used sports Supplements**

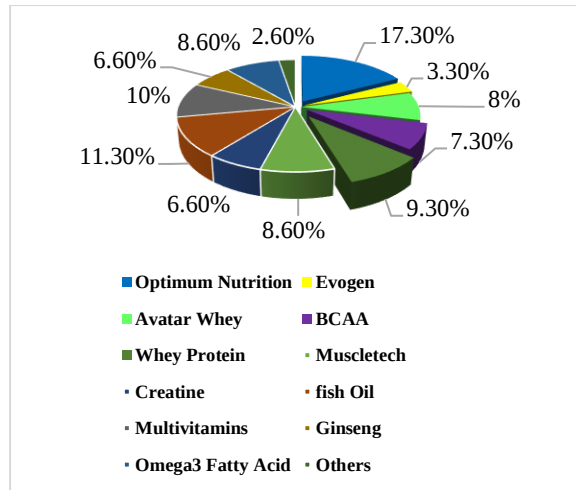
| Responses         | F  | Percent |
|-------------------|----|---------|
| Optimum Nutrition | 26 | 17.3    |
| Evogen            | 5  | 3.3     |
| Avatar Whey       | 12 | 8       |
| BCAA              | 11 | 7.3     |
| Whey Protein      | 14 | 9.3     |
| MuscleTech        | 13 | 8.6     |
| Creatine          | 10 | 6.6     |
| fish Oil          | 17 | 11.3    |
| Multivitamins     | 15 | 10      |
| Ginseng           | 10 | 6.6     |
| Omega3 Fatty Acid | 13 | 8.6     |
| Others            | 4  | 2.6     |

The table revealed that 17.3% of participants used Optimum nutrition type of supplements, 11.3% of participants used fish oil as a supplement. And multivitamins omega fatty

acids, whey protein, BCAA, Muscle Tech, evogen are the different kind of sports supplements were used by the subjects.

**Figure 1**

**Participants Commonly Used sports Supplements**



**Table 3**

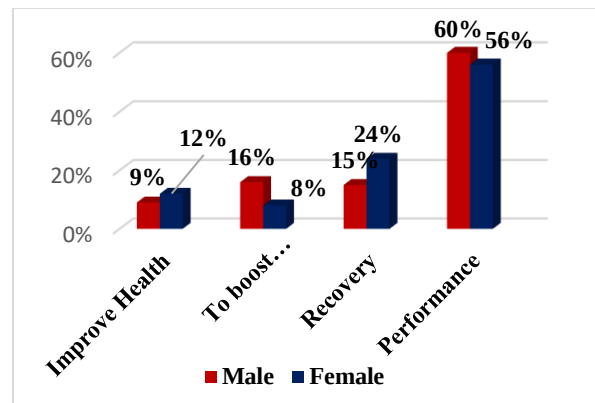
**Frequencies and Percentages of Reason for taking Sports Supplements**

| Responses         | Gender |         |        |         |
|-------------------|--------|---------|--------|---------|
|                   | Male   |         | Female |         |
|                   | F      | Percent | F      | Percent |
| Improve Health    | 9      | 9       | 6      | 12      |
| To boost Immunity | 16     | 16      | 4      | 8       |
| Recovery          | 15     | 15      | 12     | 24      |
| Performance       | 60     | 60      | 28     | 56      |

The study revealed that 60% of male and 56% of female participants used sports supplements to improve their performance. 15% of male and 24% of female participants used sports supplements for recovery. 16% of male and 8% of female participants used sports supplements to boost their immunity. At least percent of the male and female subjects used sports supplements to improve their health status.

**Figure 2**

**Reason for taking Sports Supplements**



**Table 4**

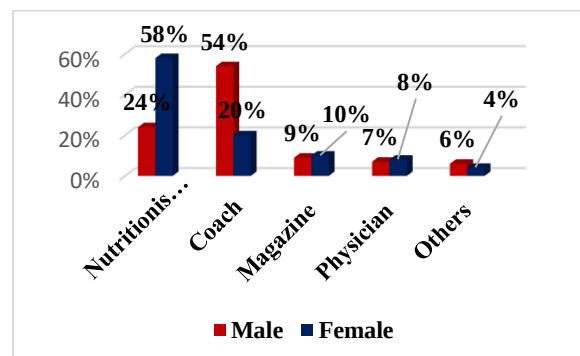
**Frequencies and Percentages of Information Gathered by Participants about Sports Supplements**

| Response                   | Gender     |         |             |         |
|----------------------------|------------|---------|-------------|---------|
|                            | Male (100) |         | Female (50) |         |
|                            | F          | Percent | F           | Percent |
| Nutritionist or Dieticians | 24         | 24      | 29          | 58      |
| Coach                      | 54         | 54      | 10          | 20      |
| Magazine                   | 9          | 9       | 5           | 10      |
| Physician                  | 7          | 7       | 4           | 8       |
| Others                     | 6          | 6       | 2           | 4       |

The study revealed that 24% of males and 58% of females received information about sports supplements from nutritionists or dieticians; the majority of males and females received information from coaches; 9% of males and 10% of females received information from magazines; 7% of males and 8% of females received information from physicians; and 6% of males and 4% of males received information from other sources.

**Figure 3**

**Information Gathered by Participants about sports Supplements**

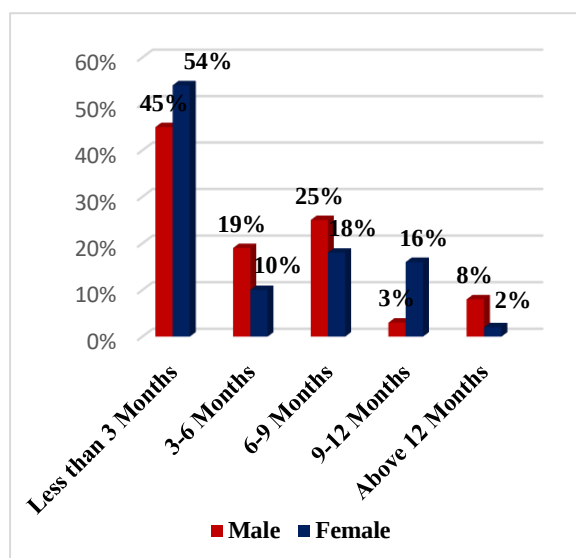


**Table 5**  
Frequencies and Percentages of Participants Duration of Usage on Dietary Supplements with Respect their Gender

| Duration           | Gender     |         |             |         |
|--------------------|------------|---------|-------------|---------|
|                    | Male (100) |         | Female (50) |         |
|                    | F          | Percent | F           | Percent |
| Less than 3 Months | 45         | 45      | 27          | 54      |
| 3-6 Months         | 19         | 19      | 5           | 10      |
| 6-9 Months         | 25         | 25      | 9           | 18      |
| 9-12 Months        | 3          | 3       | 8           | 16      |
| Above 12 Months    | 8          | 8       | 1           | 2       |

The study revealed that 45% of male participants and 54 % of female participants used supplements with the duration of less than 3 months, 19% of male participants and 10% of female participants used supplements with the duration of 3 to 6 months; 25% of male participants and 18% of female participants used supplements with the duration of 6 to 9 months; 3% of male participants and 16% of the female participants used supplements with the duration of 9 to 12 months; and 8% of male participants and 2% of female participants used supplements with the duration of above 12 months.

**Figure 4**  
Participants Duration of Usage on Dietary Supplements with Respect their Gender

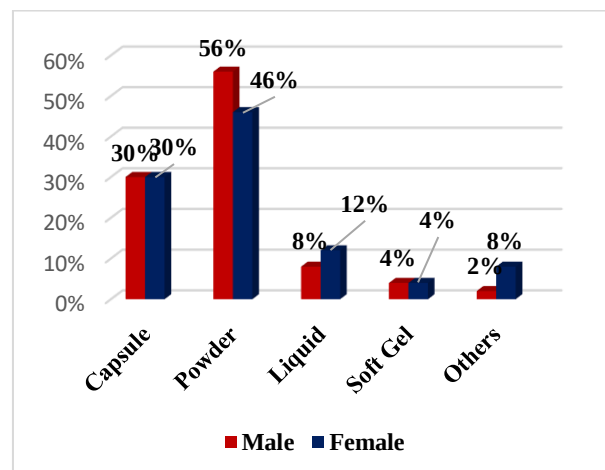


**Table 6**  
Frequencies and Percentages of different forms of Participants' Usage of Supplements

| Responses | Gender     |         |             |         |
|-----------|------------|---------|-------------|---------|
|           | Male (100) |         | Female (50) |         |
|           | F          | Percent | F           | Percent |
| Capsule   | 30         | 30      | 15          | 30      |
| Powder    | 56         | 56      | 23          | 46      |
| Liquid    | 8          | 8       | 6           | 12      |
| Soft Gel  | 4          | 4       | 2           | 4       |
| Others    | 2          | 2       | 4           | 8       |

The table revealed that 30% of male and female participants used dietary supplements in capsule form. Majority of the male and female participants used dietary supplements in powder form. Least percentage of male and female subjects were consumed in the form of liquid soft gel and other form like tablets, tonic etc.

**Figure 5**  
Different forms of Participants' Usage of Supplements



## Attitude Towards the Use of Sports Supplements

**Table 7**  
Percentages and Chi Square Analysis of Participant's Response to the Statements

| “I Believe that Using sports Supplements Improve my Sports Performance” |        |    |        |    |                |             |
|-------------------------------------------------------------------------|--------|----|--------|----|----------------|-------------|
| Responses                                                               | Gender |    |        |    | X <sup>2</sup> | P-<br>value |
|                                                                         | Male   |    | Female |    |                |             |
|                                                                         | F      | %  | F      | %  |                |             |
| Agree                                                                   | 89     | 89 | 38     | 76 | 1.46           | 0.14        |
| Disagree                                                                | 11     | 11 | 12     | 24 |                |             |

| <i>"I Believe that Sports Supplements are Safe"</i>                 |      |    |        |    |                |         |
|---------------------------------------------------------------------|------|----|--------|----|----------------|---------|
| Responses                                                           | Male |    | Female |    | X <sup>2</sup> | p-value |
|                                                                     | F    | %  | F      | %  |                |         |
| Agree                                                               | 76   | 76 | 34     | 68 | 1.20           | 0.35    |
| Disagree                                                            | 24   | 24 | 16     | 32 |                |         |
| "I Believe that <i>Sports Supplement</i> make me Healthier"         |      |    |        |    |                |         |
| Agree                                                               | 85   | 85 | 40     | 80 | 1.20           | 0.12    |
| Disagree                                                            | 15   | 15 | 10     | 20 |                |         |
| "I Believe that <i>Sports Supplements</i> Increase Mental strength" |      |    |        |    |                |         |
| Agree                                                               | 87   | 87 | 42     | 84 | 0.89           | 0.46    |
| Disagree                                                            | 13   | 13 | 8      | 16 |                |         |
| "I Believe Using <i>Sports Supplements</i> Improve Concentration"   |      |    |        |    |                |         |
| Agree                                                               | 92   | 92 | 27     | 54 | 3.26           | 0.04    |
| Disagree                                                            | 8    | 8  | 23     | 46 |                |         |
| "I Believe Using <i>Sports Supplements</i> help to Prevent Injury"  |      |    |        |    |                |         |
| Agree                                                               | 78   | 78 | 45     | 90 | 1.26           | 0.21    |
| Disagree                                                            | 22   | 22 | 5      | 10 |                |         |
| "I Believe Using Supplements Provide Proper Recovery"               |      |    |        |    |                |         |
| Agree                                                               | 73   | 73 | 22     | 44 | 4.28           | 0.02    |
| Disagree                                                            | 27   | 27 | 28     | 56 |                |         |
| "I Use <i>Sports Supplement</i> and Knowing All Its Side Effect"    |      |    |        |    |                |         |
| Agree                                                               | 65   | 65 | 37     | 74 | 1.23           | 0.41    |
| Disagree                                                            | 35   | 35 | 13     | 26 |                |         |

Table revealed that majority of the male and female subjects agreed that sports supplements were enhanced their sports performance. 11% of the male and 24 % of the female subjects were not agreed that sports supplements were enhanced their performance. There was no significant difference between male and female on the statement "I Believe that Using sports Supplements Improve my Sports Performance" ( $X^2 = 1.46, p > .05, p = .14$ ).

Table shows that majority of the male and female subjects agreed that sports supplements were safe. 24% of the male and 32 % of the female subjects were not agreed that sports supplements were safe. There was no significant difference between male and female on the statement "*I Believe that Dietary Supplements are Safe*" ( $X^2 = 1.20, p > .05, p = .35$ ).

Table revealed that majority of the male and female subjects agreed that sports supplements make them mentally healthier. 15% of the male and 20% of the female subjects were not agreed that sports supplements make them healthier. There was no significant difference between male and female on the statement "I Believe that

Dietary Supplement make me Healthier" ( $X^2 = 1.20, p > .05, p = 0.12$ ).

The results shows that 87% of the male and 84% of the female subjects were agreed that sports supplements make them healthier. 13% of the male and 16% of the female subjects were not agreed that sports supplements make them mentally healthier. There was a significant no difference between male and female on the statement "I believe that dietary supplements increase mental strength" ( $X^2 = 0.89, p > .05, p = .46$ ).

Table revealed that 92% of the male and 54% of the female subjects were agreed that sports supplements improve their concentration. 22% of the male and 10% of the female subjects were not agreed that sports supplements improve their concentration. There was a significant difference between male and female on the statement "I believe using dietary supplements improve concentration" ( $X^2 = 3.26, p < .05, p = .04$ ).

Table shows that 78% of the male and 90 % of the female subjects were agreed that sports supplements can prevent injury. 8% of the male and 23% of the female subjects were not agreed that sports supplements can prevent injury. There was no significant difference between male and female on the statement "I believe using dietary supplements help to prevent injury" ( $X^2 = 1.26, p > .05, p = .21$ ).

Table revealed that majority of the male and female subjects agreed that sports supplements were helpful for recovery. 11% of the male and 24% of the female subjects were not agreed that sports supplements were helpful for recovery. There was a significant difference between male and female on the statement "I believe using dietary supplements provide proper recovery" ( $X^2 = 4.28, p < .05, p = .02$ ).

Table revealed that majority of the male and female subjects agreed that sports supplements used with all the knowledge of its side effects. 35% of the male and 26% of the female subjects were not agreed that sports supplements used with all the knowledge of its side effects. There was no significant difference between male and female on the statement "I use dietary supplement and knowing all its side effect" ( $X^2 = 1.23, p > .05, p = .41$ ).

## Discussion of Findings

The study aimed to found out that the prevalence and attitudes towards dietary supplements among athletes. In this study, a total of 150 sports participants from Kerala state were selected for the study. The study revealed that 66% of the male participants and 34% of the female subjects were taking sports supplements. The study revealed that 60% of male and 56% of female participants used sports supplements to improve their performance. At least percent of the male and female subjects used sports supplements to improve their health status. 24% of males and 58% of females received information about sports supplements from nutritionists or dieticians; the majority of males and females received information from coaches; 9% of males and 10% of females received information from magazines. Different varieties of sports supplements were used by the athletes. 17.3% of participants used Optimum nutrition type of supplements, 11.3% of participants used fish oil as a supplement. Multivitamins omega fatty acids, whey protein, BCAA, Muscle Tech, evogen were the other supplements used by the subjects.

The results found that majority of the male and female subjects agreed that sports supplements were enhanced their performance, they believe supplements are safe to use, which helps to improve mental health, make them healthier, and helps to prevent injury. The results found that there was no significant differences between male and female athletes on the statements *sports supplements improve concentration and supplements provide proper recovery*.

## Conclusion

The study concluded that, supplementation is widespread among young athletes and is not limited to any particular demographics or sports. The primary reason people take sports supplements is to improve their athletic performance; their attitudes towards the supplements depend on how much information they have about them. Therefore, it is imperative to ensure that athletes receive continuous education regarding the use of sports supplements.

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