



# Nutrition information sources of female athletes at a girls' sports club in Kuwait: An exploratory study of sources, usefulness, accessibility, and obstacles

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## KEYWORDS

Information behaviors;  
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**Abstract** The purpose of this study was to explore the nutrition information sources used by female athletes in the Girls Sports Club in the State of Kuwait. A survey method using a questionnaire was employed. The questionnaire was distributed by coaches of each sport team. All of the players, who are trained and officially registered to compete nationally, were requested to participate in the study. Using anonymously completed questionnaires, 49 players from seven unique sports provided data.

Findings showed that although athletes were aware of the benefits of "human" sources of information, they preferred "material" sources due to accessibility and availability. The athletes relied on independent learning from websites and print publications rather than the professional advice available from nutritionists and medical doctors.

This study provides new information about current, important issues in nutrition information sources that are poorly understood. The information in this study should be used as the basis for an education program to improve players' nutrition knowledge and awareness.

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## Introduction

Nutrition is "the science of food, the nutrients and the substances therein, their action, interaction, and balance in relation to health and disease" (The Center for Health Promotion, 2006). Nutrition plays a significant role in the human lifecycle (Al-Hamahma, 2000). In its proper quality and

quantity, a healthy balanced diet provides the human body with the needed nutrients. However, to gain a broader understanding of nutrition's effect on individuals, it is necessary to understand the information behaviors and preferences reflected by individuals in different roles. This knowledge could assist in improving behaviors, and changing negative preferences, which in turns affects the overall role of nutrition.

The library and information science (LIS) literature has reflected a change towards examining user behaviors rather than focusing on systems. This shift from a system orientation to a user orientation has stimulated several attempts to model human information behavior and generate theories that would explain human information behavior in-depth and stimulate further research. However, researchers have faced difficulties

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in modeling human information behavior due to the complex nature of the behaviors, and the difficulty of generalizing a single model to encompass all human information behavior.

Therefore, exploratory studies of different groups, by occupation, role, and demographic group, continue to remain a necessary tool towards gaining a clearer understanding of the information preferences and behaviors of different groups in an attempt to affect these preferences and behaviors positively using models, theories, practical solutions, training, education, and other effective interventions.

One such group that has not been examined previously in Kuwait is female athletes. Nutrition plays a significant role in sports and by using various strategies, the nutritional state of athletes can be enhanced to improve performance overall. One aspect of these multiple strategies includes information behaviors, as effective information behaviors would assist in improving the overall state of the athlete.

Understanding nutrition guidelines is essential in seeking and using nutrition information. Therefore, this study aimed to gain an understanding of the information behaviors and preferences of female athletes towards information sources, to lay the foundation for future research that could assist in identifying strengths and weaknesses, and to affect positively the overall nutritional practices of female athletes.

## Review of related literature

Over the past century, human information behaviors have been examined by researchers from different fields in an attempt to gain an understanding of these behaviors, and the ramifications that come with them. Researchers in various fields (sociology, psychology, LIS, computer science, and others) have studied aspects of human information behavior in a variety of settings.

Over the years, the focus of LIS research has shifted from system-centered studies, such as library usage (e.g., Broadus, 1980; Drone, 1984) and information retrieval systems (e.g., Bookstein & Cooper, 1976; Cawkell, 1975), to user-centered studies, such as the roles of professionals (e.g., Leckie, Pettigrew, & Sylvain, 1996) and how these affect information behaviors. User-oriented studies did not gain popularity until the 1960s, when researchers started examining information needs and uses of scientists (Menzel, 1966). These studies examined scientists' preferences and evaluations of information sources and channels, information use, and information dissemination.

Nutrition plays a key role in health and life, and the way we search and use nutrition information is significant. Educating athletes nutritionally can have positive effects on exercise and competition. A good dietary practice is important for athletes in order to reach an optimal level that will aid them to compete effectively and efficiently. Studies have been conducted regarding nutrition information sources of the general public. The literature reviewed below covers nutrition information sources used by athletes and the usefulness of these sources.

Athletes are concerned about the importance of food in health and disease prevention. It is the obligation of nutrition professionals to provide a simple, accurate, and fair nutrition information and education. Nutrition information communication, which often appears to be complex and confusing,

is an evolving field (Tontisirin & Bhattacharjee, 2002). Understanding fundamental nutrition principles, combined with good dietary practice, is essential.

Buttriss (1997) conducted an in-depth study in the United Kingdom (UK) to assess nutrition information adoption. Respondents adopted health recommendations about nutrition and macronutrients, such as fat. The majority of the respondents (80%) were well-informed about healthy foods. Energy providing nutrients such as starch gained less interest than fat and sugar, which had received more media attention and were perceived negatively by respondents.

Abbott (1997) tested nutrition sources in the UK and focused on the use of food labels and nutrition information sources. Respondents wanted detailed, yet simple, nutrition information on food labels. Nutrition information on food labels usually affected purchasing decisions. The majority of respondents (82%) looked at food labels and read nutrition information on a regular basis.

The media has been a significant resource for nutrition information (Abbott, 1997), with television, newspapers and magazines identified as the most used nutrition information sources. In Buttriss' (1997) study, 57 percent of participants indicated that they received the major part of the nutrition information from television and radio programs. However, few of the participants (15%) found these programs useful. The frequency of use of nutrition information from magazines and newspapers came after television. Participants indicated that they frequently used schools, parents, television, and food labels as sources of their nutrition information. These studies reported that general medical practitioners were indicated as a good source of nutrition information; however, participants lacked the motivation to seek advice from health professionals (Abbott; Buttriss).

Nutrition information sources in Germany were studied by Dillen, Hiddink, Koelen, De Graaf, and Woerkum (2004). Nutrition centers, education offices of the food sector, dietitians, as well as family doctors were often sought as sources of information. Furthermore, because of its increased usage and availability, the Internet was perceived as a significant source of nutrition information because information was available when needed. Nutrition information from the media was hardly mentioned.

Some studies have indicated that gender was an important factor in seeking and using nutrition information. In general, women were more involved and educated about health issues (Abbott, 1997; Buttriss, 1997). Unlike males, females were more likely to use the nutrition information from food labels (Abbott). However, Conkle and Tishler (1992) found that the nutrition information seeking behaviors of males and females did not significantly differ and respondents considered themselves well informed about nutrition. Burke (2001) tested gender variation in information seeking and noticed that there were not significant differences between males and females in their information preferences. However, the researcher found that females received more information than males.

There are few studies on nutrition information sources sought. There is no known study conducted in the Arabian Gulf region regarding female athletes' nutrition information sources. There is a need to conduct such a study in order to gain a better understanding of their preferences and behaviors, and recommend positive interventions to improve the overall situation. Such study could stimulate

further research in this area which would assist in improving the overall information behaviors of individuals in Kuwait.

## Research questions

The research was guided by the following questions:

1. What are the nutrition information sources used by female athletes?
2. How do female athletes rate the usefulness of the nutrition information sources used?
3. How do female athletes rate the accessibility of the nutrition information sources?
4. What are the obstacles faced by female athletes in seeking nutrition information?

## Research method and procedures

This study adopted a questionnaire (see [Appendix](#)) as the primary research instrument. Due to the exploratory nature of the study, this instrument was viewed as the most effective method for obtaining data that would reflect the current situation since the main purpose of the research instrument was to collect quantitative data about the preferences of female athletes with the goal of answering the research questions posed. The questionnaire provided rich data about the targeted population.

Since there was no prior data related to the information preferences of Kuwaiti female athletes, a cross-sectional survey was used to explore the situation at the time of the study ([Babbie, 1998](#)). Despite the risks of non-response, slow speed of response, difficulty in interpreting omissions, a lack of spontaneous answers, and lack of control over who responds to the questionnaires, the instrument itself could provide large amounts of valid data inexpensively, guarantee the anonymity of the respondent, and allow the use of a bigger sample due to lack of geographic restrictions ([Krathwohl, 1998](#)).

Finally, many research studies in Kuwait (e.g. [Al-Anezi, 2000](#); [Alkhezzi, 2002](#); [Al-Najran, 1998](#); [Al-Rasheed, 1998](#); [Anwar, Al-Ansari, & Abdullah, 2004](#); [Ibrahim & Al-Ansari, 1996](#); [Sharif, 2003](#)) have used self-administered questionnaires as their primary research instrument, creating a certain degree of comfort towards participating in one. This comfort was perceived to be an advantage of using a self-administered questionnaire in this study.

Other research methods that were explored included face-to-face interviews, interviews by e-mail, focus groups, and direct observation. However, these approaches were not adopted due to issues regarding access to the Girl Sports Club, access to personal information related to the athletes (such as e-mail or telephone numbers), and the overall obtrusive nature of the methods mentioned in a society that is relatively conservative.

A questionnaire was designed, developed, and reviewed by a LIS expert in information seeking and use studies. Because the native language of respondents was Arabic, the original questionnaire was translated from English to Arabic and then it was back translated. Multiple-choice, 5-point Likert scale, and close-ended as well as open-ended questions were used. The purpose of the study and the importance of participants' contribution were communicated in writing and the preservation of the anonymity of the respondents was assured.

The entire population of Girls Sports Club (approximately 120 female athletes), who are trained to compete nationally and internationally, was invited to participate in the study. Girls Sports Club officials were approached for permission to conduct the study. Participants were easily reached due to the small sample size. The coaches of each sport were asked to distribute the questionnaire among the participants. SPSS analysis was used to calculate frequency, percentages, standard deviations, and means. Cross tabulation was used to determine the relationship between selected variables and tables were used to illustrate data and to show the relationship of patterns.

## Sample

Data showed that of the 49 total responses received (a 40% response rate), 38 respondents (77.6%) were in the 17–20 years age category, while seven (14.3%) were in the 21–24 years age category and four (8.1%) were 25 years or older. Most of the study's sample was composed of female athletes who were 20 years old or younger.

Also, the findings showed that 46 out of the 49 respondents (93.9%) visited the club at least four times per week, while 20 respondents (40.8%) indicated that they visited the club 5–7 times per week. Further, 37 respondents (75.5%) indicated that they were active in one sport only, while eight (16.3%) participated in two sports and four (8.2%) participated in three sports or more.

In terms of educational-level, 33 respondents (70.2%) had either high-school degrees or no high-school degree or equivalent, while seven respondents (14.9%) had 2-year diplomas after high-school and seven others (14.9%) had undergraduate degrees.

## De-limitations

The study was intended to explore the nutrition information sources of Girl Sports Club's players. The emphasis was on nutrition sources, their usefulness, their accessibility, and the problems faced while obtaining nutrition information. The aim was not to study socio-economic factors that influence information seeking and use behaviors. The study was not designed to focus on nutrition knowledge, dietary practices, assessment and intakes, the types of nutrition supplements used by athletes, eating habits, health conditions, or nutrition deficiencies and imbalances.

## Limitations

The sample was limited to female athletes participating in seven different sports in the Girls Sports Club that included football (soccer), basketball, volleyball, tennis, table tennis, karate, and taekwondo. Therefore, findings cannot be generalized to the entire population of female athletes in the State of Kuwait.

## Results

### Source usage

Respondents were asked to identify how often they used various types of information sources, using a scale of 0 for

"Never" to 3 for "Always". For the female athletes in this sample, the most frequently utilized sources included websites (mean = 1.67), international newspapers and magazines (mean = 1.64), coaches (mean = 1.60), and nutrition information labels (mean = 1.59); however these information sources were consulted by the sample only "Sometimes." Other sources such as libraries, medical doctors, athletic supervisors, nutritionists, and participation in lectures and conferences were more rarely used, as reflected in Table 1.

### Source usefulness

Respondents were asked to rate the usefulness of the information sources provided using an incremental scale that ranged from 0 for "Completely Not Useful" to 4 for "Very Useful." Although respondents indicated that they rarely accessed information from nutritionists and medical doctors, findings showed that nutritionists were perceived as the most useful source of information (mean = 2.94) followed by medical doctors (mean = 2.90), and websites (mean = 2.82).

As reflected in Table 2, peers, regional newspapers and magazines, and participation in lectures and conferences were perceived as the least useful sources of information, with means closer to "Neutral" in terms of usefulness.

### Accessibility of sources

Respondents were asked to rate the ease or difficulty of access to the sources listed using an incremental scale ranging from 0 for "Very Difficult" to 4 for "Very Easy". Findings, displayed in Table 3, showed that nutrition information labels, coaches, and websites were the easiest information sources to access, with means in the "Somewhat Easy" category. All sources were viewed as easy to access, with varying degrees of ease. The least easily accessed information sources were nutritionists, television and radio news broadcasts, and participation in lectures and conferences.

Again, the findings show that nutritionists, who were rarely used as information sources yet were perceived as

very useful sources of information, were not easily accessible in comparison to other sources mentioned.

### Source obstacles

Respondents were asked to identify the obstacles they faced when seeking nutrition-related information by choosing from nine obstacles identified by the researchers from discussions with administrators at the club, athletes, researchers, and others. Respondents were allowed to mark more than one obstacle. Table 4 shows that the most common obstacle faced by female athletes in terms of seeking information was the lack of a sports-specific information center in the country (61.2%) followed by the lack of a library (42.9%), the lack of time (40.8%), and the unsatisfactory amount of information received (40.8%). Also, the findings showed that respondents did not view their own information seeking skills as an obstacle, with only 16.3% identifying skills as an obstacle. Other difficulties reported by respondents included language-difficulties in relation to English-language sources, a lack of awareness of sources available, and the lack of financial support for information sources.

Also, respondents were asked to rate their information seeking skills by marking one of five choices ranging from "Weak" to "Excellent", as displayed in Table 5. Findings showed that, as implied in Table 4, respondents felt comfortable with their information seeking skill-level, with 42 of the 49 respondents (85.7%) reporting their skills were "Good" or higher. Six respondents indicated that their skills were satisfactory, with only one indicating that her skills were weak.

### Discussion

The results of this exploratory study showed that female athletes relied on independent learning rather than receiving guidance and advice from professionals, such as medical doctors or nutritionists, causing a potential information gap that needs to be analyzed and addressed. Although the athletes perceived nutritionists and medical doctors as the

**Table 1** Frequency of source usage.

Rank	Source-type	N	Mean	Standard Deviation
1	Nutrition-related websites	49	1.67	1.008
2	International newspapers & magazines	47	1.64	1.031
3	Coaches	48	1.60	1.047
4	Nutritional labels on products	49	1.59	1.059
5	Local newspapers & magazines	49	1.55	1.119
6	Regional newspapers & magazines	48	1.46	1.071
7	Own collection	48	1.42	1.145
8	Peers	48	1.29	1.051
9	Television & radio news broadcasts	49	1.29	1.061
10	Libraries & info. centers	49	1.27	1.056
11	Medical doctors	47	1.26	1.073
12	Athletic supervisors	48	1.13	1.024
13	Nutritionists	49	1.10	1.085
14	Participation in lectures & conferences	49	0.96	0.999

Scale: 0 = Never, 1 = Rarely, 2 = Sometimes, 3 = Always.

**Table 2** Source usefulness perception.

Rank	Source-type	N	Mean	Standard Deviation
1	Nutritionists	49	2.94	1.162
2	Medical doctors	49	2.90	1.295
3	Nutrition-related websites	49	2.82	1.167
4	Coaches	48	2.79	0.967
5	International newspapers & magazines	47	2.64	1.150
6	Nutrition labels on products	49	2.57	1.443
7	Own collection	48	2.54	1.220
8	Libraries & info. centers	48	2.48	1.185
9	Local newspapers & magazines	49	2.47	1.309
10	Athletic supervisors	49	2.47	1.043
11	Television & radio news broadcasts	49	2.39	1.397
12	Peers	48	2.29	1.071
13	Regional newspapers & magazines	49	2.29	1.275
14	Participation in lectures & conferences	49	2.27	1.351

Scale: Incremental with 0 = Completely not useful, 1 = Somewhat not useful, 2 = Neutral, 3 = Somewhat useful, 4 = Very useful.

most useful source of information, they were used rarely because of accessibility problems. However, coaches were found to be a very important source of information for female athletes as coaches were ranked second in terms of ease of access, third in terms of frequency of use, and fourth in terms of usefulness.

The lack of information from professionals could be due to the confidence the female athletes had in their information seeking skills as 85.7 percent indicated that their skills were good or better. This confidence could explain why female athletes favored material sources such as websites, newspapers, magazines, and nutrition labels, over human sources such as coaches, nutritionists, and medical doctors. Further, more than 77 percent of the respondents were 20 years of age or younger, indicating that they had received formal education starting in the mid-nineties or later. Public and private schools in Kuwait started adopting new technologies, and the Internet, in classrooms during the second half of the last decade, indicating that the respondents were accustomed to engaging with technology rather than human sources.

The results indicated that the respondents favored websites, newspapers, and magazines, over human sources, despite acknowledging that human sources were more useful. This could have been due to over-confidence on the part of respondents in their own abilities, lack of awareness regarding human sources, or other obstacles that need to be analyzed such as convenience, cost, and availability. Websites are usually free and newspapers and magazines are affordable by the age group targeted by the study; however, nutritionists and medical doctors require differing amounts of payment.

Further, results showed that libraries and information centers were rarely used, not perceived as highly useful, and less accessible than other sources of information. More than 60 percent of the respondents indicated that the biggest obstacle they faced when seeking information was the lack of a sports or nutrition information center in Kuwait, followed by the lack of a library or information center in the Girls Sports Club. The lack of a specialized library or information center resulted in other obstacles as for the respondents, such as limiting the amount of information received, its availability,

**Table 3** Ease of access to information sources.

Rank	Source-type	N	Mean	Standard Deviation
1	Nutritional labels on products	47	3.13	1.115
2	Coaches	48	3.13	1.003
3	Nutrition-related websites	47	3.11	1.165
4	Local newspapers & magazines	48	2.98	1.120
5	Peers	45	2.91	1.184
6	Own collection	48	2.90	1.057
7	International newspapers & magazines	47	2.79	1.318
8	Regional newspapers & magazines	47	2.79	1.334
9	Athletic supervisors	47	2.79	1.102
10	Medical doctors	47	2.79	1.366
11	Libraries & info. centers	48	2.71	1.166
12	Nutritionists	48	2.63	1.315
13	Television & radio news broadcasts	47	2.51	1.283
14	Participation in lectures & conferences	48	2.42	1.318

Scale: Incremental with 0 = Very difficult, 1 = Somewhat difficult, 2 = Neutral, 3 = Somewhat easy, 4 = Very easy.

**Table 4** Obstacles faced when seeking information.

Obstacle	Percentage
No sports nutrition information centers in Kuwait	61.2
No library or information center in the girls sports club	42.9
Not enough time available to search for information	40.8
Nutritional information I receive is sometimes not enough	40.8
The nutritional information I need is sometimes not available	36.7
The nutritional information I need is sometimes not accurate	34.7
The nutritional information I need is sometimes contradictory	34.7
Other difficulties	18.4
Lack of skills to look for information	16.3

accuracy and consistency. A lack of skill in searching for information was not perceived as a great obstacle, as only 16.3 percent of respondents indicated that it was a problem.

The lack of specialized libraries and information centers could be a major reason behind the respondents' information seeking behaviors, causing them to favor material sources over human sources. Libraries and information centers are important in bringing together professionals, such as nutritionists and other sports-related librarians, and athletes, providing a more balanced approach towards seeking information.

Although coaches played an important role in the information behaviors of female athletes and were the highest ranked human source used by the athletes, the respondents indicated that coaches were less "useful" in comparison to nutritionists, medical doctors, and websites. This finding indicated that respondents were aware of the sources available to them, yet they were unable to access them as easily as other information sources, affecting their rates of usage.

## Conclusions and recommendations

This exploratory study indicates that the female athletes responding to the survey are more dependent on material

**Table 5** Respondents' information seeking skill-level.

Skill-Level	N	Percent
Excellent	8	16.3
Very Good	16	32.7
Good	18	36.7
Satisfactory/Fair	6	12.2
Weak	1	2.0
Total	49	100.0

sources such as websites and magazines, in comparison to human sources such as nutritionists and medical doctors. The responses indicate that this is due to access as "free" sources were perceived to be more accessible, and more frequently used, than "pay" sources. Awareness of human sources was not an issue as respondents indicated that nutritionists and medical doctors were the most useful sources of information. However, human sources were used less frequently in comparison to other sources. In addition to the lack of a direct link to medical doctors, it seems that the official capacity of the athletes as amateurs in this sample, rather than professionals, affected their information behaviors greatly. Since most athletes do not have a well-formed path to become professionals as they develop, they may take their information needs less seriously because a large number of them do not become professional athletes and a high number of them leave sports entirely.

Also, results indicate that coaches at the Girls Sports Club play an important role in the information behaviors of the respondents, as they were accessible, frequently used, and somewhat useful. Coaches are available to guide athletes in their tasks, including their information needs, free of charge. The "free" guidance by coaches is an important factor for the participants in the study in using coaches as an information source.

Further, the results indicate that libraries and information centers may be under-valued and under-utilized by female athletes in Kuwait. The lack of a specialized library or information center that was easily accessible to athletes seemed to assist in affecting the behaviors of the athletes negatively, as they became more dependent on material sources rather than human sources. Although this is a small exploratory study, the results indicate that a library may assist greatly in improving the information behavior of female athletes and catering to their needs. It could provide a common place where athletes and professionals could interact to yield better information, and provide access to "premium" information sources rather than depend on "free" and potentially erroneous information available on websites.

From this exploratory study, the following four recommendations are made with the aim of improving the information behaviors of female athletes in Kuwait.

1. Establish a specialized library at the Girls Sports Club to guide and enhance the information behaviors of female athletes,
2. Provide athletes with frequent lectures, workshops, and training sessions relating to information behaviors in order to raise awareness of information sources available, provide the opportunity to use new sources of information, and improve behaviors overall,
3. Provide coaches with frequent specialized training related to information as they play a key role in guiding athletes,
4. Establish a link between the Girls Sports Club and nutritionists and medical doctors in order to enhance the quality of information available to athletes, and allow them to view the advantages of such human sources. This link should consider the current obstacles of time, transportation, and financial resources.

## Appendix

### Information Behaviors of Female Athletes in Kuwait

Please answer all questions provided, as your responses are important for the outcome of this study. Thank you for your greatly appreciated time and cooperation.

#### Part 1- Information Behaviors

1- Please indicate how frequently you use each of the following sources for nutrition-related information by marking your answer with a ✓ in the appropriate box.

Information Source	Never	Rarely	Sometimes	Always
Nutritionists				
Medical Doctors				
Coaches				
Peers				
Athletic Supervisors				
Libraries & Information Centers				
Own Collection				
Local Newspapers & Magazines				
Regional Newspapers & Magazines				
International Newspapers & Magazines				
Nutrition-related Websites				
Television and Radio News Broadcasts				
Nutritional Labels on Products				
Participation in Lectures & Conferences				

2- Please indicate the usefulness of the following sources for nutrition-related information by marking your answer with a ✓ in the appropriate box.

Information Source	Completely Not Useful	Somewhat Not Useful	Neutral	Somewhat Useful	Very Useful
Nutritionists					
Medical Doctors					
Coaches					
Peers					
Athletic Supervisors					
Libraries & Information Centers					
Own Collection					
Local Newspapers & Magazines					
Regional Newspapers & Magazines					
International Newspapers & Magazines					
Nutrition-related Websites					
Television and Radio News Broadcasts					
Nutritional Labels on Products					
Participation in Lectures & Conferences					

3- Please indicate the degree of ease or difficulty in accessing the following sources for nutrition-related information by marking your answer with a ✓ in the appropriate box.

Information Source	Very Difficult	Somewhat Difficult	Neutral	Somewhat Easy	Very Easy
Nutritionists					
Medical Doctors					
Coaches					
Peers					
Athletic Supervisors					
Libraries & Information Centers					
Own Collection					
Local Newspapers & Magazines					
Regional Newspapers & Magazines					
International Newspapers & Magazines					
Nutrition-related Websites					
Television and Radio News Broadcasts					
Nutritional Labels on Products					
Participation in Lectures & Conferences					

4- What are some of the obstacles you face when seeking nutritional information? You can choose more than one answer by marking the related box with a ✓ mark.

1.  Lack of skills to look for information
2.  No library of information center in the Girls Sports Club
3.  The nutritional information I need is sometimes not available
4.  Not enough time available to search for information
5.  Nutritional information I receive is sometimes not enough
6.  The nutritional information I need is sometimes not accurate
7.  The nutritional information I need is sometimes contradictory
8.  No sports nutrition information centers in Kuwait
9.  Other difficulties or obstacles (Please indicate by writing \_\_\_\_\_)

5- Please rate your information-seeking skills by choosing one of the following:

1.  Weak
2.  Satisfactory
3.  Good
4.  Very Good
5.  Excellent

## **Part 2- Personal Information**

Please answer all questions in this section. Your information will remain confidential and anonymous.

1- Please indicate your age by choosing one of the following categories (Please round up, or down, to the closest whole number):

- 17-20
- 21-24
- 25-28
- 29-32
- 33 and above

2- How many sports do you participate in at the club?

- 1
- 2
- 3 or more

3- How many times do you visit the club weekly?

- 5-7 times
- 3-4 times
- 1-2 times

4- What is your educational level?

- Less than high-school
- High-School diploma
- 2-year diploma after high-school
- Undergraduate degree
- Graduate degree

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