

# PODIUM

Journal of Science and Technology in Physical Culture

SCIENTIFIC PUBLICATIONS DEPARTAMENT

Volumen 16  
Issue 3

2021

University of Pinar del Río "Hermanos Saíz Montes de Oca"

Director: Fernando Emilio Valladares Fuente

Email: fernando.valladares@upr.edu.cu

Translated from the original in spanish

Original article

## Offer, conditions, and associativity: contributions on a survey of sports habits to municipal planning

### Oferta, condiciones y asociatividad: aportes de una encuesta de hábitos deportivos a la planificación municipal

### Oferta, condições e associatividade: contribuições de uma pesquisa de hábitos esportivos para o planejamento municipal

Carlos Matus Castillo<sup>1\*</sup>  <https://orcid.org/0000-0001-8019-6442>

Diego Oliva González<sup>1</sup>  <https://orcid.org/0000-0003-1930-5544>

Miguel Cornejo Améstica<sup>1</sup>  <https://orcid.org/0000-0003-4579-605X>

Camilo Vargas Contreras<sup>2</sup>  <https://orcid.org/0000-0001-8603-7303>

<sup>1</sup>Catholic University Santísima Concepción. Department of Sports Science and Physical Conditioning. Chile.

<sup>2</sup>Department of Physical Education. University of Concepción. Chile.

<sup>3</sup>DUOC UC Professional Institute, Chile.

\*Corresponding author: [cmatus@ucsc.cl](mailto:cmatus@ucsc.cl)

**Recibido:** 07/08/2020.

**Aprobado:** 03/07/2021.

How to cite ítem: Matus Castillo, C., Oliva González, D., Cornejo Améstica, M., & Vargas Contreras, C. (2021). Oferta, condiciones y asociatividad: aportes de una encuesta de hábitos deportivos a la planificación municipal. *PODIUM - Journal of Science and Technology in Physical Culture*, 16(3), 714-730. <https://podium.upr.edu.cu/index.php/podium/article/view/973>



## ABSTRACT

The aim of the study was to describe the offer of sports and physical activity, the conditions for the practice of the population; and the characteristics of the sport association capacities, through a survey conducted among the inhabitants of a Chilean city, being the results a research contribution in the context of the elaboration of a Municipal Plan of Physical Activity and Sports. It is a descriptive, exploratory, and cross-sectional work, in which a standardized institutional in-person survey was applied. The sample was for convenience, but representative of the two sectors of the city surveyed, with a total of 209 people participating, men and women who were 15 years old and older. Descriptive statistics using frequency distribution was applied to analyze data. The results indicate that the perception about the level of physical activity practice and the number of sport facilities have increased, but they are still insufficient. A high use of municipal sports services has been also identified, with football being the most demanded sport offer. Regarding levels of participation in sport organizations, these have increased in relation to the national average; however, it still represents a low percentage. In addition, there is a tendency to practice sports preferably on an individual type.

**Keywords:** Physical activity; Sporting associativity; Conditions; Sport; Survey; Offer; Municipal sports plan.

## RESUMEN

El objetivo del estudio fue describir la oferta deportiva y de actividad física, las condiciones para la práctica de la población y las características de la asociatividad deportiva, mediante la aplicación de una encuesta a los habitantes de una ciudad chilena, siendo los resultados un aporte investigativo en el contexto de la elaboración de un Plan Municipal de Actividad Física y de Deportes. Trabajo de tipo descriptivo, exploratorio y de corte transversal, en el cual se aplicó de forma presencial una encuesta estandarizada de tipo institucional. La muestra fue por conveniencia, pero representativa de los dos sectores encuestados de la ciudad, participando un total de 209 personas, hombres y mujeres que tenían 15 años y más. Para analizar los datos, se empleó la estadística descriptiva, utilizando la distribución de la frecuencia. Los resultados señalan que ha aumentado la percepción sobre el nivel de práctica de actividad física y el número de las instalaciones deportivas, pero aún son insuficientes. También se identifica un alto uso de los servicios deportivos municipales, siendo el fútbol la oferta deportiva más demandada. Acerca de los niveles de participación en organizaciones deportivas, estos han aumentado en relación con el promedio nacional, no obstante, representa un bajo porcentaje. Junto a ello, se observa una tendencia a la práctica deportiva preferentemente de tipo individual.

**Palabras clave:** Actividad física; Asociatividad deportiva; Condiciones; Deporte; Encuesta; Oferta; Plan municipal deportivo.

## RESUMO

O objetivo do estudo foi descrever a oferta de esporte e atividade física, as condições para a prática da população e as características da associatividade esportiva, através da aplicação de uma pesquisa aos habitantes de uma cidade chilena, sendo os resultados uma contribuição de pesquisa no contexto do desenvolvimento de um Plano Municipal de Atividade Física e Esporte. Este é um estudo descritivo, exploratório e transversal, no qual uma pesquisa institucional padronizada foi aplicada pessoalmente. A amostra foi por conveniência, mas representativa dos dois setores pesquisados da



cidade, com um total de 209 pessoas participantes, homens e mulheres com 15 anos ou mais. Foram utilizadas estatísticas descritivas para analisar os dados, utilizando a distribuição de frequência. Os resultados mostram que a percepção do nível de atividade física e o número de instalações esportivas aumentaram, mas ainda são insuficientes. Também é identificada uma alta utilização dos serviços esportivos municipais, sendo o futebol a oferta esportiva mais demandada. Os níveis de participação em organizações esportivas aumentaram em relação à média nacional, mas ainda representam uma baixa porcentagem. Além disso, há uma tendência para que o esporte seja praticado principalmente por indivíduos.

**Palavras-chave:** Atividade física; Associativismo esportivo; Condições; Esporte; Pesquisa; Oferta; Plano esportivo municipal.

## INTRODUCTION

In the context of communal sport, the adequate execution of physical activity (PA) and sport promotion programs provided by public services in the case of municipalities, is subject to conditioners coming from the management and administration of the offer, which results will determine the achievement of its objectives (Matus-Castillo *et al.*, 2018; Matus-Castillo *et al.*, 2020).

Part of the problems that can be generated in the implementation of PA programs at the community level is that these organizations generally do not know the characteristics of the population, their interests, the conditions for practice and local sports associativity, among others. Thus, they are in a situation that limits the design of relevant activities that allow delivering a quality service, since the user, when accessing a particular sports center, according to Rodríguez-Marrero (2013), expects a series of benefits that can range from access to the practice of sport, as well as other additional benefits to the sports service, which can occur both before and after the sport practice. In this sense, the solutions could emanate from the proper management of public institutions, in this case municipalities, which must ensure the delivery to the community of an offer of quality activities, based on the knowledge of the characteristics of its population. Possessing this type of information is a relevant condition when designing and executing programs for the community.

In this sense, at the normative level, the Organic Law of Municipalities of Chile (Ministry of the Interior, 2006), in its article 4, indicates that municipalities may develop functions related to tourism, sport and recreation. The relevance of the article is that it considers that sport is a field of action in which a municipality can intervene through the implementation of municipal plans and sports programs.

In order to contextualize the practice of PA and sport and the levels of sedentary lifestyles, it is relevant to note that the World Health Organization (WHO) recognizes low levels of PA in the world population, including adults, adolescents and children (WHO, 2010). This is because they do not meet the internationally recommended minimum levels of practice. In this way, physical inactivity is positioned as the fourth indicator of mortality worldwide (World Health Organization, 2009), thus implying that many countries include within their public policies the promotion of PA and sport, due to the multiple benefits that this generates both at psychological, social and health levels (Warburton and Bredin, 2017; Mandolesiet *et al.*, 2018).



In the case of Chile, the rates of physical inactivity and sedentary lifestyle do not differ much from the global reality; this is observed in two studies applied at the country level. The first corresponds to the National Health Survey 2016-2017 (hereinafter ENS) of the **Ministry of Health (2017)**, which indicates that 86.7 % of the population is sedentary. The second work corresponds to the National Survey of Physical Activity and Sport Habits in population aged 18 years and over (hereinafter ENHAFyD) of the **Ministry of Sport (2018)**, which data report that 81.3 % of the population is physically inactive. The same study details the percentages of physical inactivity distributed in the 16 regions that make up Chile and for the case of the Biobío region, where the results of this article were obtained, it can be seen that 69.4 % of the inhabitants are in this category.

One of the reasons that justify this study, together with the current scenario derived from physical inactivity and sedentary lifestyles, lies in the fact that Chile is recently in the implementation stage of the National Strategic Plan for Physical Activity and Sport 2016-2025 (**Ministry of Sport, 2016a**), which considers municipalities as relevant actors in the management of sport at the communal level and as part of the national sports system. In this framework, the current National Policy on Physical Activity and Sport 2016-2025 (**Ministry of Sport, 2016b**), a fundamental instrument that is at the basis of the Strategic Plan, points out that, among the most recognized organizations of the sports sector, are the municipalities with 25.3 % of recognition. In this sense, the **ENHAFyD (Ministry of Sport, 2018)** states that 83.6 % of respondents would turn to the municipality, when in need of a sports service.

Another relevant aspect to diagnose at the basis of the development of a communal or municipal sports planning is the state of their sports facilities. In this context, **Benítez-Llanes et al. (2013)** state that access to sports facilities must be subject to a set of safety and usability conditions that support a healthy and pedagogically correct physical-sports activity. National statistics in this aspect indicate that 34 % of the population practices PA in public venues, mainly of municipal administration, constituting an axis of transversal work for local sports development. In addition, it is reported that municipal sports services (SDM) have a high valuation with respect to institutions related to sport, ranking second, after associations and clubs (**Ministry of Sport, 2018**).

On the other hand, regarding the forms used to know the characteristics of the population around PA and sport habits, the literature points out that interviews applied through surveys are the most used, essentially due to their low cost, mechanisms to analyze the data, level of standardization, among others. This is how a series of studies conducted in Spain (**García Ferrando, 2000; García Ferrando and Llopis, 2017**) are identified, also in Europe it was found studies in France (**Ministère de la Ville, de la Jeunesse et des Sports, 2010**), Germany (**Klostermann and Nagel, 2012**) and the one conducted by the European Union (**European Commission, 2010**). In Latin America, it was found the cases of Argentina (**Ministerio de Salud, 2019**), Uruguay (**Intendencia de Montevideo, 2017**), Cuba (**Rodríguez et al., 2019; Tolano, 2020**) and Mexico (**Centro de Estudios Sociales y de Opinión Pública, 2014**). In them, the use of the survey is mainly identified, because they are useful for the description and prediction of a phenomenon (**Bisquerra, 2009**), which must be consistent with the objectives of the research. In the particular case of Chile, the ENHAFyD appears, a study that was applied every three years by the **National Institute of Sports (2006, 2009 and 2012)** and that later, passed to the coordination of the **Ministry of Sport (2015 and 2018)** with the same periodicity, providing in its various versions important data for the design of public sports policies in that country, disaggregating its results regionally, however, the data at the communal level (municipalities) are not included.



This research was developed in the city of Talcahuano, located in the Biobío region of Chile. To obtain information, it was used as a reference the communal survey applied in this same city (Talcahuano) in 2012 for the development of its first Municipal Plan of PA and Sport. The municipality of this city and specifically its sports service decided in 2017 to update its Municipal PA and Sports Plan 2014-2017 (Municipality of Talcahuano, 2014), opting to apply, among other mechanisms, a communal survey of PA and sports habits, in order to update the data obtained in the previous application of the same instrument (2012). It is in this sense, that this survey is part of a series of devices that, as a whole, allowed the municipality to collect relevant data for the development of the Municipal Plan, such as participatory dialogues with leaders and athletes, documentary review of previous planning, communal socioeconomic statistics, among others.

The objective of this study is to describe the sports and physical activity offer, the conditions for the practice of the population and the characteristics of sports associativity through the application of a survey to the inhabitants of a Chilean city in the context of the elaboration of a Municipal Plan of Physical Activity and Sports.

To carry out this study, instruments used in works such as: (the Communal Survey Habits of Physical Activity and Sport of Talcahuano, 2012; Municipality of Talcahuano, 2014; National Institute of Sports, 2012; National Institute of Statistics, 2017; Microdata Center, 2011) were taken into account.

## **MATERIALS AND METHODS**

This research had a quantitative approach, given that the variables were expressed on a numerical scale in which the symbols are ordered in defined distributions or ranges. This type of study also allows repeating and facilitating the comparison between similar investigations, using numerical variables. The scope of the work was descriptive, since these studies seek to specify the properties, characteristics and profiles of people, groups, communities or any other phenomenon that is subjected to analysis. At the same time, it is categorized as exploratory, since these investigations are carried out when the objective is to examine a little studied topic, of which there are many doubts because they have hardly been approached before. As for the research design, it was cross-sectional, which means that the information is taken only once and at a specific time and also non-experimental type since there is no manipulation of variables and the phenomenon or phenomena are analyzed as they occur in their natural context.

### **Measuring instrument**

For this research, data collection was carried out through the type of survey already mentioned as a reference in this work, which was designed *ad hoc* by the Talcahuano Community Sports Office, in the Municipality of Talcahuano, with the aim of obtaining information to generate the Municipal Plan of PA and Sport. The validation of the instrument was carried out by two university academics with experience in the area of sports management and three specialists in municipal sports administration. For the elaboration and adjustments of the survey, variables from the ENHAFyD and the institute that directly attends to sport in that locality were also used.

The results presented in this article correspond to that communal survey, but applied in 2017. For its new application, the questionnaire had adjustments with respect to its previous edition (2012), referring to the order of presentation of the questions and the





incorporation of others, however, the original structure (2012) was generally maintained. In addition to the above, two instances of piloting and preliminary analysis of the data were carried out and then reviewed and validated by an academic specialist in sport management. The survey used in 2017 had 37 questions, divided into four dimensions (Table 1).

**Table 1.-** Dimensions and number of survey questions

Dimension	Number of questions
Physical activity and sport habits	9
Offers and conditions in the practice of sports	16
Sports associativity	5
Beliefs about physical activity and sport	7

For the purposes of this study, the dimensions of Offers and conditions in the practice of sports and Sports Associativity were used. The instrument was applied in person between the months of August and December 2017, through trained interviewers.

### Population and sample

The population of the city of Talcahuano was 151,749 inhabitants in 2017, according to announced statistical institution, however, for this study, the population of two demographically significant areas of the commune was considered. The selected sectors were Higueras and Centro, which presented a population projection to the year 2017 of 35,938 and 27,682 people, respectively. The study population was composed of people who were 15 years old or older at the time of being surveyed, being women and men.

In order to establish a relevant sample, a sample calculation was made under criteria of representativeness and sampling error (98.0 % representativeness, with a 5.0% margin of error), with the objective of obtaining a number of potential respondents that would provide information as close to reality as possible. In addition, stratification and proportional allocation were used, in order to generate a broad and diverse sample, considering the number of inhabitants residing in each surveyed sector. However, in accordance with the survey application mechanism, the sample was by convenience, but representative of each sector. The final sample was 209 surveys: Higueras sector with 116 surveys and Centro sector with 93 surveys. The final valid surveys were 202. The ages of the people surveyed ranged from 15 to 91 years old, with an average of 51.2 years old and a median of 53 years old. Of the total valid sample, 57.6 % (116) were women and 42.4 % (86) were men.

### Procedure for data collection

A survey was applied through trained personnel, who went to different households, interviewing only those persons who were 15 years of age or older, of both genders. It was begun by defining a representative sample of surveys to be applied for each of the city's sectors (number of blocks per sector). Once the sample was defined, the sectors were distributed among the interviewers and then the survey was applied, following the following protocol:



1. Identify the block: each interviewer was given a map with the blocks where the surveys were to be administered, indicating the number of surveys to be administered in that block. The number (code) of each block was determined randomly.
2. Locate the north corner of the block: the enumerator identified the selected block and should stand on the north corner with the right side of his or her body (right hand) facing the houses/households on the selected block.
3. House identification: from the corner they had to advance to the third house (house number 3) and apply the instrument and so on, successively, until completing the number of surveys in that block.
4. Application of the instrument: on arriving at the house drawn by lot, the inhabitants were asked if they wished to answer the survey; if the answer was positive, an informed consent form was applied. The person who responded had to be 15 years of age or older and did so in his or her personal capacity.

If there were no dwellers or they refused to respond, the reason for the non-application should be recorded on the address sheet, and then the previous point should be applied again (counting three more houses/households) and so on, successively, until the survey was applied. If more than one survey was considered in the selected block, it was necessary to continue from the house where the previous survey was applied, counting up to house number three. This protocol considered certain methodological aspects derived from the National Socioeconomic Characterization Survey (Encuesta de Caracterización Socioeconómica Nacional-CASEN).

### **Data analysis**

Descriptive statistics were used, with the purpose of numerically representing and describing the data obtained, analyzing the total sample according to the type of question, which were distributed in two dimensions. Likewise, an analysis by gender was carried out for each of the variables. The frequency distribution presented as percentages was used. The *software* used was *Microsoft Excel 2016*.

## **RESULTS**

The results of the two dimensions analyzed are presented below: Offers and conditions for sports practice and sports associativity.

### **Dimension: Offers and conditions in the practice of sports**

The first question was: In your opinion, in the sector where you live, is there sufficient PA or sports? This question asked whether the inhabitants of the sectors considered that the practice of PA was sufficient or insufficient (Table 2). According to the total number of respondents, 38.9 % (77) stated that it was sufficient, while 61.1% (121) were of the opposite opinion. When comparing men and women, we can see that both men and women declared that the PA carried out in Talcahuano is insufficient (59.5 % and 62.3 %, respectively).





**Table 2.** - Level of PA practice in the sector

<b>Alternatives</b>	<b>Total (H-M) % (n)</b>	<b>Men % (n)</b>	<b>Women % (n)</b>
<b>Insufficient</b>	61,1 (121)	59,5 (50)	62,3 (71)
<b>Enough</b>	38,9 (77)	40,5 (34)	37,7 (43)
<b>Total</b>	<b>100 (198)</b>	<b>100 (84)</b>	<b>100 (114)</b>

Total % (H and M) (n = 198), Males (H) and Women(M)

Table 3 contains two questions focused on the valuation and state of the sports facilities. The first question was: Would you say that the facilities for the practice of sport that exist in your neighborhood and commune are sufficient or insufficient for the needs of people like you and your family? 68.0 % of those surveyed said that they were insufficient, while 27.5 % thought that they were sufficient. As it can be seen, both men and women reported similar results, with the majority of respondents stating that sports facilities are insufficient (68.2 % and 67.8 % respectively). Regarding the state of public sports facilities in the commune (multi-purpose courts, gymnasiums, stadiums, etc.). The question was: In what state are these sports facilities? 43.5 % said they were in *good condition*, followed by those who said they were in *fair condition* with 30.5 %, 7.0% said they were in *bad condition*, only 5.0 % said the facilities were in *very good condition* and, finally, 2.5 % said they were in *very bad condition*. Females reported a better assessment of the sports facilities than males (Table 3).

**Table 3.** - Assessment of sports facilities in your sector and state of sports facilities.  
 Total %

<b>Assessment of the sports facilities in your sector</b>	<b>Total (H-M) % (n)</b>	<b>Men % (n)</b>	<b>Women % (n)</b>
<b>They are insufficient</b>	68 (136)	68,2 (58)	67,8 (78)
<b>They are enough</b>	27,5 (55)	25,9 (22)	28,7 (33)
<b>No facility close to home</b>	4,5 (9)	4,5 (5)	3,5 (4)
<b>Total</b>	<b>100 (200)</b>	<b>100 (85)</b>	<b>100 (115)</b>
<b>Condition of sports facilities</b>	<b>Total (H-M) % (n)</b>	<b>Men % (n)</b>	<b>Women % (n)</b>
<b>Very good condition</b>	5 (10)	5,8 (5)	4,4 (5)
<b>Good condition</b>	43,5 (87)	38,4 (33)	47,4 (54)
<b>Fair condition</b>	30,5 (61)	39,5 (34)	23,7 (27)
<b>Bad condition</b>	7 (14)	2,3 (2)	10,5 (12)
<b>Very bad condition</b>	2,5 (5)	4,7 (4)	0,9 (1)
<b>Don't know/no answer</b>	11,5 (23)	9,3 (8)	13,2 (15)
<b>Total</b>	<b>100 (200)</b>	<b>100 (86)</b>	<b>100 (114)</b>

(M and F), Men (M) and Women (F)



Table 4 shows the results regarding the use and types of sports services used. When asked if they have used or use the sports services offered by the municipality, it is reported that 34.5 % of the inhabitants use these services, versus 43.1 % who have never used them and only 12.7 % stated that they used the services before, but currently do not. Both men and women report similar results. In relation to the type of services used, it was asked: what type of sports services offered by the municipality do you use or have you or a member of your family group used, and respondents could choose more than one option. In the first place, gym programs for adults (36.8 %), followed by the use of sports facilities (14.5 %); in third place, aerobic gymnastics with 12 % and in fourth place, sports schools (11.1 %). With regard to the responses of men and women, it is observed that gym programmes for adults are the most used services (42.6 % and 32.9 %, respectively). Only those who reported that a member of the family group uses or used a sports service responded to this question (Table 4).

**Table 4.** - Use of municipal sports services and types of sports services used. Total % (M and F), Men (M) and Women (F)

Use of municipal sports services	Total (H-M) % (n)	Men % (n)	Women % (n)
<b>If they currently use them</b>	34,5 (68)	35,3 (30)	33,9 (38)
<b>Never used them</b>	43,1 (85)	44,7 (38)	42 (47)
<b>They have used them before, but now they have not</b>	12,7 (25)	8,2 (7)	16,1 (18)
<b>Don't know</b>	9,6 (19)	11,8 (10)	8 (9)
<b>Total</b>	<b>100 (197)</b>	<b>100 (85)</b>	<b>100 (112)</b>
Types of sports services used	Total (H-M) % (n)	Men % (n)	Women % (n)
<b>Adult Fitness Program</b>	36,8 (43)	42,6 (20)	32,9 (23)
<b>Use of municipal sports facilities</b>	14,5 (17)	19,1 (9)	11,4 (8)
<b>Aerobic gymnastics</b>	12 (14)	8,5 (4)	14,3 (10)
<b>Municipal sports schools (up to 18 years old)</b>	11,1 (13)	12,8 (6)	10 (7)
<b>Dance workshops</b>	9,4 (11)	6,4 (3)	11,4 (8)
<b>Support for sports teams or clubs (grants)</b>	7,7 (9)	6,4 (3)	8,6 (6)
<b>Complementary recreational activities</b>	2,6 (3)	0 (0)	4,3 (3)
<b>Swimming</b>	1,7 (2)	0 (0)	2,9 (2)
<b>Don't know</b>	4,3 (5)	4,3 (2)	4,3 (3)
<b>Total</b>	<b>100 (117)</b>	<b>100 (47)</b>	<b>100 (70)</b>

Table 5 presents the results of two questions oriented to know aspects of promotion of physical activities and sports. The first question was: which activities should be promoted as a priority from the SDM of the commune? The alternative "Gymnasium program for adults" (47.7 %) stands out over the other options, followed by "Municipal sports schools" with 19.0 %. In spite of the fact that the preference of both genders is inclined towards the *adult gymnasium programme* (59.1 % men and 39.9 % women), a relevant difference is observed in the alternatives "Swimming" and "Dance workshops", which, in their majority, were chosen by women. In this question, one or two options could be



chosen per respondent. The second question was: which sport or type of PA should be promoted as a priority in Talcahuano, with a maximum of three options to choose from. The most frequent alternative was Football with 22.2 %, followed by Swimming with 12.9 %, in third place, we found Cycling (11.8 %) and in fourth place Dance and its similar (aerobic gymnastics, zumba, entertaining dance, etc.) with 11.5 %. In terms of preferences by gender, women show a more diverse distribution in relation to men, in which the discipline of football stands out. In the case of women, swimming stands out (19.4 %) (Table 5).

**Table 5.** - Activities that should be promoted and sports that should be encouraged at the communal level. Total % (M and F), Men (M) and Women (F)

Activities that should be promoted as a priority	Total (H-M) % (n)	Man % (n)	Women % (n)
<b>Adult Fitness Program</b>	<b>47,7(148)</b>	<b>59,1 (75)</b>	<b>39,9 (73)</b>
<b>Municipal sports schools (up to 18 years old)</b>	19 (59)	21,3 (27)	17,5 (32)
<b>Swimming</b>	13,2 (41)	1,6 (2)	21,3 (39)
<b>Dance workshops</b>	8,1 (25)	2,4 (3)	12 (22)
<b>Recreational activities: summer camps, recreational courses, etc.</b>	5,2 (16)	6,3 (8)	4,4 (8)
<b>Aerobic gymnastics</b>	2,9 (9)	3,1 (4)	2,7 (5)
<b>Support for sports teams or clubs (grants)</b>	1,9 (6)	3,9 (5)	0,5 (1)
<b>Competitive activities (competitions)</b>	0,3 (1)	0,8 (1)	0 (0)
<b>Other</b>	1,6 (5)	1,6 (2)	1,6 (3)
Total	<b>100 (310)</b>	<b>100 (127)</b>	<b>100 (183)</b>
Sports that should be promoted at the communal level	Total (H-M) % (n)	Man % (n)	Women % (n)
<b>Football</b>	22,2 (96)	35,5 (66)	12,1 (30)
<b>Swimming</b>	12,9 (56)	4,3 (8)	19,4 (48)
<b>Cycling</b>	11,8 (51)	11,3 (21)	12,1 (30)
<b>Dancing and the like (aerobic gymnastics, fun dancing, among others)</b>	11,5 (50)	8,1 (15)	14,2 (35)
<b>Running activities</b>	10,2 (44)	10,8 (20)	9,7 (24)
<b>Rhythmic and artistic gymnastics</b>	7,4 (32)	2,7 (5)	10,9 (27)
<b>Tennis</b>	4,4 (19)	7,5 (14)	2 (5)
<b>Physical activity for older adults</b>	3 (13)	2,2 (4)	3,6 (9)
<b>Recreational activities</b>	0,7 (3)	0,5 (1)	0,8 (2)
<b>Other sports</b>	15,9 (69)	17,2 (32)	15 (37)
Total	<b>100 (433)</b>	<b>100 (186)</b>	<b>100 (247)</b>

### Dimension: Sport associativity

Table 6 contains three questions about participation, involvement and interest in sports organizations. The first question is: Have you ever belonged or do you belong to a sports organization such as a club, association, league or sports federation? 64.3 % stated that they had never belonged to a sports organization; 21.6 % said that they had belonged, but were not affiliated (disaffiliated) and only 14.1 % reported belonging to a sports organization at present. When comparing the responses by gender, it can be seen that



men have a higher participation in the organizations than women (23.8 % and 7.0 %, respectively).

When asked, would you like to join or rejoin any club, association, league or sports federation? It is observed that 55.0 % would not like or would not rejoin, while the remaining 45.0 % stated that they would like to belong to a sports organization. It is noteworthy that more than 50.0 % of the women would like to join or rejoin a sports organization; in the case of men, it is only 35.4 %. Only those who reported "never having belonged" or "used to belong and now do not" to a sports organization answered this question.

When asked, why would you not like to join a club, association, league or sports federation? The main reasons given were: "they do not like being associated" (28.4 %), followed by "the age of the respondent" (23.2 %) and, in third place, "the timetable is not compatible with their activity" (14.7 %). With regard to what men and women say, differences can be observed, since the former relate it fundamentally to the fact that "they do not like being associated or belonging to an organization" (39 %), while women justify it by the "age of the respondent" (24.1 %). This question was answered by those who said that they would not like to join or rejoin a sports organization (Table 6).

**Table 6.** - Participation, incorporation and interest in sports organizations. Total % (M and F), Men (M) and Women (F)

Participation in sports organizations	Total (H-M) % (n)	Men % (n)	Women % (n)
<b>I have never belonged (no affiliation)</b>	64,3 (128)	46,4 (39)	77,3 (89)
<b>Before I belonged, now I don't (disaffiliation)</b>	21,6 (43)	29,8 (25)	15,7 (18)
<b>Currently belongs to a sports organization (membership)</b>	14,1 (28)	23,8 (20)	7 (8)
<b>Total</b>	<b>100 (199)</b>	<b>100 (84)</b>	<b>100 (115)</b>
Joining or rejoining sports organizations	Total (H-M) % (n)	Men % (n)	Women % (n)
<b>Yes</b>	45 (77)	35,4 (23)	50,9 (54)
<b>No</b>	55 (94)	64,6 (42)	49,1 (52)
<b>Total</b>	<b>100 (171)</b>	<b>100 (65)</b>	<b>100 (106)</b>
Why wouldn't you like to join a sports organization?	Total (H-M) % (n)	Men % (n)	Women % (n)
<b>Dislikes being associated with/belonging to an organization</b>	28 (26)	39 (16)	19,2 (10)
<b>Because of your age</b>	23,7 (22)	22(9)	24,1 (13)
<b>The schedules are not compatible with your activity</b>	14,7 (13)	14,6 (6)	13,5 (7)
<b>He/she likes independence. Doing sports on your own</b>	10,8 (10)	9,8 (4)	11,5 (6)
<b>He/she does not consider it necessary</b>	10,8 (10)	7,3 (3)	13,5 (7)
<b>I don't know any clubs nearby</b>	2,2 (2)	0 (0)	3,8 (2)
<b>They are not convinced by the ones</b>	1,1 (1)	0 (0)	1,9 (1)
<b>Other, which one</b>	9,7 (9)	7,3 (3)	11,5 (6)
<b>Total</b>	<b>100 (93)</b>	<b>100 (41)</b>	<b>100 (52)</b>



Table 7 only has information from those respondents who stated that they belong to a sports organization. The first question asked: Are you a member of one or more of the following sports organizations? In the first question, 64.3 % are members of a private, non-profit sports club, while 28.6 % say that they belong to a sports league, association or federation. Of those surveyed, none said they belonged to a private gymnasium and 7.1 % said they belonged to another type of organization. The results by gender show that women have a higher level of participation in clubs, while men have a higher level of participation in higher organizations, such as associations, leagues or sports federations (Table 7).

**Table 7.** - Type of sports organization to which you belong and type of participation in the organization. Total % (M and F), Men (M) and Women (F)

Type of sports organization to which you belong	Total (H-M) % (n)	Men % (n)	Women % (n)
<b>Member of a private, non-profit sports club (soccer, track, basketball, etc.)</b>	64,3 (18)	60 (12)	75 (6)
<b>Member of a sports association, league or federation</b>	28,6 (8)	35 (7)	12,5 (1)
<b>Member of a private gym</b>	0 (0)	0 (0)	0 (0)
<b>Another</b>	7,1 (2)	5 (1)	12,5 (1)
<b>Total</b>	<b>100 (28)</b>	<b>100,0 (20)</b>	<b>100 (8)</b>
Type of participation in the organization	Total (H-M) % (n)	Men % (n)	Women % (n)
<b>I participate in sports activities</b>	66,7 (18)	60 (12)	85,7 (6)
<b>I participate in social activities</b>	18,5 (5)	20 (4)	14,3 (1)
<b>I do not participate in the activities of the organization</b>	11,1 (3)	15 (3)	0 (0)
<b>I am involved in managerial activities (management).</b>	3,7 (1)	5 (1)	0 (0)
<b>Total</b>	<b>100 (27)</b>	<b>100 (20)</b>	<b>100 (7)</b>



## DISCUSSION

The comparative exercise of results obtained, both in the communal survey of Talcahuano (2012 and 2017) and the national surveys of physical activity and sport habits in the adult population (ENHAFyD, 2015; 2018) coordinated by the Ministry of Sport, allows us to arrive at the following:

The perception regarding the level of PA practice in the commune has increased significantly, however, the results are still negative, as in 2012. Regarding the assessment of the number of communal sports facilities, the results show that there would be a significant increase in sports facilities in relation to the year 2012, however, the number of people who state that they are still insufficient is still higher.

In relation to the use of municipal sports services, a significant percentage of the population stated using them (34.5 % in 2017), which is similar to the figures reported by the ENHAFyD (2018), evidencing that this municipal sports service would have a similar behavior to the national trend.

In this same context, but with regard to the promotion of specific sports activities, there is a maintenance in the preference for the sport that should be prioritized in the planning of the sports service, with football, as a collective sport, being the most demanded (22 % in 2012 and 22.2 % in 2017). However, differences are observed in the rest of the activities that follow in order of priority, since while dance and its similar, along with athletics, stood as the most preferred sports in the 2012 consultation, in 2017 swimming and cycling (disciplines of individual practice) occupied the first places of preference. These results differ from recent national findings (ENHAFyD, 2015), in which dance and its similar (aerobic gymnastics, entertaining dance, among others) are in first place, marking a significant difference with football.

Regarding participation in sports organizations in this city, there is an increase of three percentage points between measurements, from 11.0 % in 2012 to 14.1 % in 2017. The result is relevant, as when contrasted with the national situation in the ENHAFyD (2018), only 7 % of the population reported belonging to a sports organization. Although the figures could be considered low, there is a relevant development of sports associativity at the communal level.

In general terms, an improvement is observed in the variables evaluated in relation to the application of the instrument in 2012, however, these results are still negative, this is the case of the perception of the increase in the practice of PA, the number of sports facilities at the communal level, however, these facilities would be in good conditions for the practice. It is a focus of attention that there is a relevant difference with the ENHAFyD, in relation to the sport practice that should be more encouraged at communal level, this could be associated to a particular sport culture or seal of this city.

Regarding the aspects related to associativity, a population with a high level of participation in sports organizations is identified, in relation to the indicators at the country level; this would imply the development of communal sports strategies in this sense, or it would respond to cultural aspects of the city. But, on the other hand, an important resistance of the population is also identified, as they manifest in a high degree, not wanting to participate formally in sport organizations, identifying themselves with a sport practice preferably of individual type and not associated.





It can be noted that the municipal sports service has improved in the variables evaluated in relation to the survey applied in 2012, however, it presents challenges that must be assumed in order to increase the levels of PA practice and deliver a high quality service. In addition, the results reported in this research will allow the sports service to have information to improve the development of its activities, identify weaknesses and enhance strategies in specific areas. Moreover, they allow establishing communication with other sources of information that are relevant in the development of the Municipal Plan of Physical Activity and Sport, such as tools such as participatory dialogues, analysis of institutional documentation, socio-demographic variables, among others.

## ACKNOWLEDGEMENTS

The authors of this article are grateful to the Municipality of Talcahuano in Chile and its Sports Office for their willingness to participate in this study and for the collection, analysis and dissemination of the data obtained.

## REFERENCES

- Benítez-Llanes, J., Montesino-Cervantes, N. y Benítez-Cuadot, I. (2013). Índices de evaluación para la disminución del nivel de riesgos en los espacios, aditamentos e implementos físico-deportivos recreativos. *Podium. Revista electrónica de Ciencia y Tecnología en la Cultura Física*, 8(23).  
<http://podium.upr.edu.cu/index.php/podium/article/view/421>
- Bisquerra. R. (2009). *Metodología de la Investigación Educativa* (3ª. ed.). Madrid: Editorial La Muralla.
- Centro de Estudios Sociales y de Opinión Pública (2014). *Encuesta telefónica sobre hábitos deportivos*.  
<http://www5.diputados.gob.mx/index.php/esl/content/download/10435/53424/file/50-Habitos-deportivos.pdf>
- Centro de Microdatos. (2011). *Encuesta de Caracterización Socioeconómica Nacional CASEN. Manual de Trabajo de Campo*. Universidad de Chile.  
[http://observatorio.ministeriodesarrollosocial.gob.cl/layout/doc/casen/manual\\_2011\\_.pdf](http://observatorio.ministeriodesarrollosocial.gob.cl/layout/doc/casen/manual_2011_.pdf)
- European Commission. (2010). *Sport and Physical Activity*. European Commission.  
[https://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs\\_334\\_en.pdf](https://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_334_en.pdf)
- García Ferrando, M. (2000). *Los españoles y el deporte: prácticas y comportamientos en la última década del siglo XX. Encuesta sobre los hábitos deportivos de los españoles*. Madrid: Consejo Superior de Deportes.
- García Ferrando, M. y Llopis Goig, R. (2017). *La popularización del deporte en España. Encuestas de hábitos deportivos 1980-2015*. Madrid: Centro de Investigaciones Sociológicas y Consejo Superior de Deportes.



- Instituto Nacional de Deportes. (2006). *Encuesta Nacional de Hábitos de Actividad Física y Deporte en población chilena de 18 años y más*. Santiago. Instituto Nacional de Deportes.
- Instituto Nacional de Deportes. (2009). *Encuesta Nacional de Hábitos de Actividad Física y Deporte en población chilena de 18 años y más*. Santiago. Instituto Nacional de Deportes.
- Instituto Nacional de Deportes. (2012). *Encuesta Nacional de Hábitos de Actividad Física y Deporte en población chilena de 18 años y más*. Santiago. Instituto Nacional de Deportes.  
[https://www.redatam.org/redchl/injuv/injumap/InjuMapIV/docs/fuentes/Deportes\\_2012.pdf](https://www.redatam.org/redchl/injuv/injumap/InjuMapIV/docs/fuentes/Deportes_2012.pdf)
- Instituto Nacional de Estadísticas. (2017). *Estimaciones y Proyecciones de la Población de Chile 1992-2050 (Total País)*. Instituto Nacional de Estadísticas.  
<http://www.censo2017.cl/>
- Intendencia de Montevideo. (2017). *Estudio sobre actividad física y hábitos deportivos de los montevideanos - 2017*. Intendencia de Montevideo.  
<https://montevideo.gub.uy/sites/default/files/biblioteca/presentaciondeportesyactividadfisica-dic17im.pdf>
- Klostermann, C. y Nagel, S. (2012). Changes in German sport participation: Historical trends in individual sports. *International Review for the Sociology of Sport*, 49(5).  
<https://journals.sagepub.com/doi/10.1177/1012690212464699>
- Mandolesi, L., Polverino, A., Montuori, S., Foti, F., Ferraioli, G., Sorrentino y Sorrentino. (2018). Effects of Physical Exercise on Cognitive Functioning and Wellbeing: Biological and Psychological Benefits. *Frontiers in Psychology*, 9.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5934999/>
- Matus-Castillo, C., Cornejo-Améstica, y Tello-Silva, D. (2018). Los servicios deportivos municipales en Chile. Un diagnóstico de su estructura y relaciones. *Revista Espacios*, 39(11). <https://www.revistaespacios.com/a18v39n11/18391114.html>
- Matus-Castillo, C., Oliva, D., Garrido, B. y Cornejo-Améstica, A. (2020). Hábitos y creencias sobre la práctica de actividad física y deporte en la ciudad de Talcahuano, Chile. Un estudio exploratorio para la elaboración de un Plan Comunal de Actividad Física y Deportes. *Revista Espacios*, 41(9).  
<https://www.revistaespacios.com/a20v41n09/20410929.html>
- Ministerio de Salud. (2017). *Encuesta Nacional de Salud 2016-2017*. Ministerio de Salud.  
[http://www.ipsuss.cl/ipsuss/site/artic/20171122/asocfile/20171122142253/ens\\_2016\\_17\\_primeros\\_resultados.pdf](http://www.ipsuss.cl/ipsuss/site/artic/20171122/asocfile/20171122142253/ens_2016_17_primeros_resultados.pdf)
- Ministerio de Salud de Argentina. (2019). *4º Encuesta Nacional de Factores de Riesgo*. Ministerio de Salud de Argentina.  
[http://www.msal.gov.ar/images/stories/bes/graficos/0000001622cnt-2019-10\\_4ta-encuesta-nacional-factores-riesgo.pdf](http://www.msal.gov.ar/images/stories/bes/graficos/0000001622cnt-2019-10_4ta-encuesta-nacional-factores-riesgo.pdf)
- Ministerio del Deporte. (2016a). *Plan Estratégico Nacional de Actividad Física y Deporte 2016 2025*. Ministerio del Deporte. <http://www.mindep.cl/wp->



content/uploads/2016/06/Plan  
Resumen.pdf

-Estrat%C3%A9gico-Nacional-Mindep-

Ministerio del Deporte. (2016b). *Política Nacional de Actividad Física y Deporte 2016-2025*. Ministerio del Deporte. <http://www.mindep.cl/wp-content/uploads/2015/05/POLITICA-ULTIMA-VERSI%C3%93N-021116.pdf>

Ministerio del Deporte. (2015). *Encuesta Nacional de Hábitos en Actividad Física y Deporte en población de 18 años y más*. Santiago. Ministerio del Deporte.

Ministerio del Deporte. (2018). *Encuesta Nacional de Hábitos en Actividad Física y Deporte en población de 18 años y más*. Ministerio del Deporte. <http://www.mindep.cl/encuesta-actividad-fisica-y-deporte-2018>.

Ministerio del Interior. (2006). *Ley N° 18.695, Orgánica Constitucional de Municipalidades*. Ministerio del Interior. <http://www.leychile.cl/Navegar?idNorma=251693>

Ministère de la Ville, de la Jeunesse et des Sports. (2010). *La pratique des activités physiques et sportives en France*. [http://www.sports.gouv.fr/IMG/pdf/la\\_pratique\\_des\\_activites\\_physiques\\_et\\_sportives\\_en\\_france.pdf](http://www.sports.gouv.fr/IMG/pdf/la_pratique_des_activites_physiques_et_sportives_en_france.pdf)

Municipalidad de Talcahuano. (2014). *Plan Comunal de Deportes de Talcahuano 2014 - 2017*. Talcahuano.

Organización Mundial de la Salud. (2010). *Recomendaciones mundiales sobre actividad física para la salud*. OMS. <https://www.who.int/dietphysicalactivity/publications/9789241599979/es/>

Rodríguez, C., Coll, J., Rodríguez, A., Fernández, Y. y Valdés, Y. (2019). Diagnóstico de la práctica de ejercicio físico en el municipio Guanabacoa. *Podium. Revista electrónica de Ciencia y Tecnología en la Cultura Física*, 14(3). <http://podium.upr.edu.cu/index.php/podium/article/view/832>

Rodríguez-Marrero, B. (2013). La gestión de la innovación como instrumento para la competitividad en las organizaciones deportivas. *Podium. Revista electrónica de Ciencia y Tecnología en la Cultura Física*, 8(1). <http://podium.upr.edu.cu/index.php/podium/article/view/455>

Tolano, E. (2020). Motivos y hábitos que inciden sobre la práctica de actividad física en estudiantes de secundaria. *Podium. Revista electrónica de Ciencia y Tecnología en la Cultura Física*, 15(2). <http://podium.upr.edu.cu/index.php/podium/article/view/857>

Warburton, D. y Bredin, S. (2017). Health benefits of physical activity a systematic review of current system aticre views. *Current Opinion in Cardiology*. 32(5). <https://europepmc.org/article/med/28708630>

World Health Organization. (2009). *Global health risks: mortality and burden of disease attribute able to selected major risks*. World Health Organization. ISBN 9789241563871. <https://apps.who.int/iris/handle/10665/44203>



**Conflict of interests:**

The authors declare not to have any interest conflicts.

**Authors' contribution:**

The authors have participated in the writing of the work and analysis of the documents.



This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International license  
Copyright (c) 2021 Carlos Matus Castillo, Diego Oliva González, Miguel Cornejo Améstica, Camilo Vargas Contreras

