HEALTH PROFILE AND TRAINING HABITS OF 42K MARATHONERS, TEMUCO CHILE

PERFIL DE SAÚDE E HÁBITOS DE TREINAMENTO DE MARATONISTAS DE 42K, TEMUCO CHILE

PERFIL DE SALUD Y HÁBITOS DE ENTRENAMIENTO DE MARATONISTAS 42K, TEMUCO CHILE

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ABSTRACT

Context: participation of runners in marathons increases each year, making them an attractive population to investigate. In Chile, the characteristics of marathoners in decentralized and emerging races, such as the Temuco Araucanía International Marathon (MITA), are not yet known. Objective: to describe health profile, sociodemographic characteristics, and training habits of the 42K runners enrolled in MITA during the years 2017, 2018 and 2019. Methods: Non-probabilistic convenience sample composed of people over 18 years of age, who signed informed consent. The data were obtained through a survey prepared by the authors, and were analyzed with the statistical program Stata 16.0 to describe the group based on the variables of health profile, sociodemographic characteristics and training habits. Results: 135 adult marathoners were included (n=42-2017, n=45-2018, n=48-2019). The mean age was 39.5±9.1 years and 86.6% were men. Fifteen percent self-reported comorbidities, 96.7% were non-smokers, 80% were normal weight, 65% had a high educational level and 87% were workers. Regarding training habits, it is noteworthy that the frequency was 4.9±1 days per week, with a mean duration of 89±1 minutes per session. Finally, 71.9% of the sample reported doing high intensity training. Conclusions: the MITA 42K runners are generally healthy subjects, nonsmokers and without comorbidities; mostly men, normal weight, middle age, with a high educational level and workers. They present a high frequency of weekly training, with an average duration of 90 minutes per session, this being carried out at high intensity by almost 2/3 of the sample. Knowledge of the health profile and training habits of runners is a first step to responsibly generate guidelines that contribute to strengthening the safe practice of this sport. ***Level of Evidence IV; Descriptive and Cross-Sectional Study.***

Keywords: Marathon Running; Sociodemographic Factors; Sports; Global Health.

RESUMO

Introdução: a participação de corredores em maratonas aumenta a cada ano, tornando-os uma população atrativa para investigação. No Chile, ainda não são conhecidas as características dos maratonistas em corridas descentralizadas e emergentes, como a Maratona Internacional Temuco Araucanía (MITA). Objetivo: descrever o perfil de saúde, características sociodemográficas e hábitos de treinamento dos corredores de 42K inscritos no MITA durante os anos de 2017, 2018 e 2019. Métodos: Amostra não probabilística de conveniência composta por pessoas maiores de 18 anos, que assinaram o termo de consentimento livre e esclarecido. Os dados foram obtidos por meio de um questionário elaborado pelos autores e foram analisados com o programa estatístico Stata 16.0 para descrever o grupo com base nas variáveis de perfil de saúde, características sociodemográficas e hábitos de treinamento. Resultados: foram incluídos 135 maratonistas adultos (n=42-2017, n=45-2018, n=48-2019). A média de idade foi de 39,5±9,1 anos e 86,6% eram homens. Comorbidades autorreferidas 15%, 96,7% não fumantes, 80% eutróficos, 65% com alta escolaridade e 87% trabalhadores. Em relação aos hábitos de treino, destaca-se que a frequência foi de 4,9±1 dias por semana, com duração média de 89±1 minutos por sessão. Por fim, 71,9% da amostra relatou fazer treinamento de alta intensidade. Conclusões: os corredores do MITA 42K são indivíduos geralmente saudáveis, não fumantes e sem comorbidades; em sua maioria homens, eutróficos, de meia idade, com alto nível educacional e trabalhadores. Apresentam uma elevada frequência de treino semanal, com duração média de 90 minutos por sessão, sendo este realizado em alta intensidade por quase 2/3 da amostra. O conhecimento do perfil de saúde e hábitos de treino dos corredores é um primeiro passo para gerar com responsabilidade orientações que contribuam para o fortalecimento da prática segura deste esporte. ***Nível de Evidência IV; Estudo Descritivo e Transversal.***

Descritores: *Corrida de Maratona; Maratonistas; Fatores Sociodemográficos; Esportes; Saúde Internacional.*

RESUMEN

Introducción: la participación de corredores en maratones aumenta cada año, convirtiéndolos en una población atractiva de investigar. En Chile, aún no se conocen las características de maratonistas de carreras descentralizadas y emergentes, como la Maratón Internacional Temuco Araucanía (MITA). Objetivo: describir el perfil de salud, las características sociodemográficas y los hábitos de entrenamiento de los corredores de 42K, inscriptos en MITA durante los años 2017, 2018 y 2019. Métodos: Muestra no probabilística por conveniencia mayores de 18 años, que firmaron

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el término de consentimiento informado. Los datos fueron obtenidos a través de la aplicación de una encuesta de elaboración original, analizados con programa estadístico Stata 16.0 para describir al grupo en función de las variables perfil de salud, sociodemográficas y hábitos de entrenamiento. Resultados: Se incluyeron 135 adultos maratonistas (n=42-2017, n=45-2018, n= 48-2019) La edad promedio fue de 39,5±9,1 años y 86,6% fueron hombres. El 15% auto reportó comorbilidades, 96,7% eran no fumadores; 80% eran normopeso, con un 65% de participantes con nivel educacional alto y 87% trabajadores. En cuanto a los hábitos de entrenamiento, se destaca que la frecuencia es de 4,9±1 días por semana, con una duración media de 89±1 minutos por sesión y finalmente, el 71,9% de la muestra reporta realizar entrenamiento de alta intensidad. Conclusiones: los corredores 42K del MITA son en general sujetos sanos, no fumadores y sin comorbilidades; en su mayoría hombres, normopeso, de edad media, con un nivel educacional alto y trabajadores. Presentan una alta frecuencia de entrenamiento semanal, con una duración promedio de 1:30 minutos por sesión, siendo realizada a alta intensidad casi 2/3 de la muestra. El conocimiento del perfil de salud y hábitos de entrenamiento de los corredores, constituye un primer paso para generar, de forma responsable, lineamientos que contribuyan a fortalecer la práctica segura de este deporte. ***Nivel de Evidencia IV; Estudio Descriptivo y Transversal.***

Descriptores: *Carrera de Maratón; Factores Sociodemográficos; Deportes; Salud Internacional.*

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INTRODUCTION

Characteristics of marathon runners is an emergent field of investigation considering the current context of public sports and health policies, added to the growing interest of the population to participate in massive events that include high intensity efforts. Such interest is reflected in the large number of urban marathons in Europe and America.[1] Thus, running has become one of the most popular sports and recreational activities, gathering over 1.8 million participants in more than 5,000 marathons carried out around the world.[2]

The increase in marathon runners worldwide is probably related to the ease of this practice, the few access barriers and the flexibility provided by the fact that it can take place practically in any setting and at any time.[3] In Chile, running is the third most practiced activity, corresponding to 12% of all sports practitioners.[4]

Just as international marathons have grown, the number of 42K runners has also increased exponentially. This is evidenced in 2019 Barcelona marathon, in which 22,000 runners participated; and in 2019 Santiago, Chile where 6,347 out of 33,000 runners entered 42K category.

This phenomenon has led to studying running considering health, psychological and social aspects. However, in Chile there are few studies developed in this area.

In Chile, Temuco-Araucanía International Marathon (MITA from Maratón Internacional Temuco-Araucanía), an emergent decentralized race has been run since 2016. It is valid for the International Association of Athletics Federations; and in its 2017 version, it allowed to qualify directly for the World Athletics Championships in London. On the other hand, participants registered in 42K has been gradually increasing, widely surpassing 100 runners since its second version. MITA has been held annually except 2020 version, suspended due to COVID-19 pandemic.

Objective of this study was to describe health profile, sociodemographic characteristics, and training habits of 42K runners, enrolled in MITA between 2017 and 2019.

MATERIALS AND METHODS

Study design

Descriptive, cross-sectional observational study was developed. This was done based on three data records of transversal temporality collected separately in 2017-2019 versions of MITA.

Participants

Research was carried out in Temuco, Chile. Study population were adults enrolled in 42K category, in MITA 2017-2018-2019. Selection criteria were being 18 years old or older and agreed to participate by signing an informed consent. Sample was non-probabilistic.

Invitation to participate was made during the collection of participants kits the day before the marathon.

To comply with Chilean regulations on scientific research on human beings, the study was approved by certified Scientific Ethics Committees South Araucania Health Service, folio number 00000038 and 00000044, march 7, 2018 and 2019, respectively.

Procedures

Data were obtained through the "Survey of Habits and Lifestyle for adult runners", created by the researchers and subjected to a prior content validity process by a panel of experts. For its preparation, the PACE Survey[5] and 2016 National Survey of Physical Activity and Sports Habits, of the chilean Ministry of Sports were taken as a reference.[4]

Questionnaire was self-reported, consistent with what has been used in other similar observational studies[6,7,8.] Itconsisted of 41 questions distributed in 6 dimensions.

Variables for each dimension were

Health Profile: Body mass index (BMI) defined as weight (kg) divided by height (cm) squared. Disability: defined as a generic term encompassing impairments, activity limitations, and participation restrictions, was considered as present or not. Additionally, type of disability was identified as visual, auditory, physical, visceral, intellectual, motor or other. Arterial hypertension, diabetes mellitus (DM) and hypercholesterolemia or high cholesterol were considered as present or not, if these conditions had been diagnosed by a physician according to the participant's self-report. Finally, participants were consulted about tobacco consumption (non-smoker, ex-smoker, current smoker).

Sociodemographic characteristics: Sex (male-female), date of birth (in years), nationality, educational level (in years of schooling, classified as low: <8 years, medium: between 8-2 years and high:>12 years) and occupation, (professional, technical, non-professional occupation, unemployed, pensioner, student, armed forces and law enforcement, artist, or athlete).

Training habits: it was asked dichotomously whether the person had undergone a sports physical examination; training frequency (days/week); training duration (minutes/session); and frequency of high intensity training that was dichotomized considering the answers "often" and "almost always" as positive and "almost never" and "rarely" as negative. In addition, participants were consulted for the frequency of performing

another sport and for membership in a sports club, which were also evaluated dichotomously.

Statistical analysis

Descriptive statistics tools appropriate to each type of variable were used. Thus, frequency distribution tables were designed for categorical variables, and measures of central tendency (mean) and variability (range and standard deviation, SD) were calculated for continuous variables. In addition, association between variables was explored, which is presented in bar graphs of means and whiskers for the corresponding SD.

For inferential analysis, the level of statistical significance was 5%. Statistical significance in comparison of means was assessed using T-test and, failing that, Wilcoxon Rank Sums Test. In dichotomous variables, comparison of percentages was carried out using Fisher's Exact Test.

Results were analyzed using statistical program Stata 16.0©.

RESULTS

Sample consisted of 135 marathoners. In 2017, (35%) were interviewed; in 2018, 32% and in 2019, people (24%).

Health history according to sex and year of MITA are shown in Table 1. It stood out that approximately 80% were normal weight, without statistically significant differences in distribution of nutritional status frequencies by gender.

Trend in distribution of nutritional status by gender did not differ significantly in any of the MITA versions (p-value >0.3, Wilcoxon). Average BMI of men (23.5) was significantly higher than that of women (20.9) (p-value = 0.004, T-test) in 2017, situation that was not observed in later versions. Regarding associated risk conditions, in 2018-2019 less than 10% indicated having been diagnosed with hypertension, hypercholesterolemia or DM-II. In general, no disability situations were reported, except in 2019 where one marathoner was counted. Sample was mainly non-smoker (prevalence of smokers 4.7% in 2018 and 2.4% in 2019).

Sociodemographic characteristics according to sex and MITA year are shown in Table 2. Higher proportion of men was observed, which determined significant differences by sex. Average age did not show significant differences by sex, mean age being 39.5 years (9.1 SD). Nor were statistically significant differences observed according to educational level, standing out category "13 years and over" (>65%). Regarding occupation over 87% reported being a professional, technical or non-professional worker. Over the years, a slight upward trend was observed in percentage of professional male marathoners.

Training habits according to sex and MITA year are shown in Table 3. Underwent a previous sports physical examination is reported by 68.3% (SD16.83), without statistically significant differences between sex. Mean age for the beginning of regular training, was 20-30 years for both sexs, being later in women. Average weekly training frequency, 4.9 days (±1 SD) (Figure 1); average duration of training session 89 minutes (1 SD) (Figure 2) and prevalence of high intensity training over 70% (Figure 3). Even though no statistically significant differences were observed according to sex in the three versions, 2017 sample showed greater frequency, duration and prevalence of high intensity training than the other versions. Although not statistically significant, there is a slight tendency to decrease duration of training over the years. More than 40% of men reported practicing another sport; and more than 50% acknowledged being a member of a sports group.

DISCUSSION

In Chile, there are few studies regarding sociodemographic characteristics, health profile and training habits of marathoners.

The *health profile* shows a group consisting mainly of men and women of normal weight, predominantly non-smokers and without associated comorbidities (cardiovascular risk factors).

Even considering that profile of marathoners could be described as healthy, it is important to note that enroling in a race requires to sign the registration terms and conditions; in which participants must confirm that their health is compatible with this type of physical activity and are responsible for any type of accident. In this sample, more than half of the participants affirmed to underwent sports physical examinations, in agreement with the results of the PACE study that associates this behavior with a health-oriented subgroup of population. However, it is unsatisfactory from the point of view of preventive medicine,[9] because unfortunately, despite declaring a compatible state of health, in 2019 Santiago marathon more than 900 runners were treated for health reasons, and even one person died. Due to this, it is important to investigate in a more specific way both the health profile and the previous medical examination, so that a stricter criterion is used when allowing the registration of runners.

Regarding sociodemographic *variables*, we can conclude that 42K runners are generally adults between 38-40 years old, with women reporting the lowest average age. These values coincide with the records of other marathons in the world, such as Dublin 2018 (average 40 years[10]); New York 2018 (average 41.7 years); and Zurich Maratò of Barcelona (average 39.7 years[11]).

Regarding educational level, MITA marathoners had a high level of education, most of them had a professional or technical role, situation that is consistent with evidence found in literature. For example, a study

Table 1. Health history of the sample according to sex and year of MITA.

Health history		MITA 2017 (n=42)			MITA 2018 (n=45)			MITA 2019 (n=48)		
		Women (21,4%)	Men (78,6%)	Valor p	Women (4,4%)	Men (95,6%)	Valor p	Women (14,6%)	Men (85,4%)	P value
Body weigth (kg)**		53,4 (6,0)	68,9 (9,0)	0,003	59,0 (2,8)	68,5 (9,7)	0,174	56,6 (7,4)	69,7 (8,2)	0,001
Size (mt)**		1,60 (0,01)	1,71 (0,01)	0,003	1,65 (0,07)	1,71 (0,01)	0,253	1,59 (0,05)	1,72 (0,07)	0,001
Body mass index (kg/m^2)**		20,9 (1,7)	23,5 (2,4)	0,004	21,9 (1,4)	23,2 (2,3)	0,405	22,3 (2,1)	23,7 (2,6)	0,180
Nutritional Condition*	Underweight	1 (11,1)	0 (0,0)	0,577+	0 (0,0)	1 (2,3)	0,442+	0 (0,0)	0 (0,0)	0,396+
	Normalweight	8 (88,9)	21 (67,7)		2 (100,0)	30 (69,8)		6 (85,7)	29 (70,7)	
	Overweight	0 (0,0)	10 (32,3)		0 (0,0)	12 (27,9)		1 (14,3)	10 (24,4)	
	Obesity	0 (0,0)	0 (0,0)		0 (0,0)	0 (0,0)		0 (0,0)	2 (4,9)	
Disability*		-	-		0 (0,0)	0 (0,0)		1 (14,3)	1 (2,4)	
Hypertension*		-	-		1 (50,0)	1 (2,6)		0 (0,0)	5 (13,2)	
Diabetes mellitus type 2*		-	-		0 (0,0)	0 (0,0)		0 (0,0)	1 (2,6)	
High cholesterol*		-	-		0 (0,0)	2 (5,1)		0 (0,0)	5 (12,8)	
Current smoking*		-	-		0 (0,0)	2 (4,8)		0 (0,0)	1 (2,5)	

* n(%), ** mean (SD), + Wilcoxon Trend Test. (-) Measurement not recorded.

Table 2. Sports and training habits of the sample, according to sex and year of MITA.

Sociodemographic Characteristics		MITA 2017			MITA 2018			MITA 2019		
		Women	Men	p value	Women	Men	p value	Women	Men	p value
Surveyed n (%)		9 (21,4)	33 (78,6)	--	2 (4,4)	43 (95,6)	--	7 (14,6)	41 (85,4)	--
Age in years mean (SD)		38,4 (10,5)	42,8 (13,3)	0,322	38,0 (6,0)	38,3 (1,6)	0,971	38,6(10,8)	38,7(9,6)	0,971
⊦ Age groups in years	18 - 28	1 (11,1)	3 (9,1)	*0,015	0 (0,0)	6 (14,6)	0,999	1 (14,3)	3 (7,7)	0,626
	29 - 38	3 (33,3)	15 (45,5)		1 (50,0)	18 (43,9)		4 (57,1)	16 (41,0)	
	39 - 48	0 (0,0)	11 (33,3)		1 (50,0)	13 (31,7)		0 (0,0)	14 (35,9)	
	49 - 58	4 (44,4)	3 (9,1)		0 (0,0)	2 (4,9)		2 (28,6)	5 (12,8)	
	59 - 68	0 (0,0)	1 (3,0)		0 (0,0)	2 (4,9)		0 (0,0)	1 (2,6)	
	69 y más	1 (11,1)	0 (0,0)		0 (0,0)	0 (0,0)		0 (0,0)	0 (0,0)	
⊦ Nacionality	Chilean	7 (77,8)	33 (100,0)	0,042	2 (100,0)	43 (100,0)	--	7 (100,0)	38 (97,4)	0,999
	Argentinian	1 (11,1)	0 (0,0)		0 (0,0)	0 (0,0)		0 (0,0)	0 (0,0)	
	Kenyan	0 (0,0)	0 (0,0)		0 (0,0)	0 (0,0)		0 (0,0)	1 (2,6)	
	USA	1 (11,1)	0 (0,0)		0 (0,0)	0 (0,0)		0 (0,0)	0 (0,0)	
⊦ Educational level (years)	< 8	0 (0,0)	0 (0,0)	0,405	0 (0,0)	0 (0,0)	0,44	0 (0,0)	3 (7,3)	0,290
	8 y 12	1 (12,5)	10 (31,3)		0 (0,0)	15 (34,9)		2 (33,3)	10 (24,4)	
	≥ 13	7 (87,5)	22 (68,8)		2 (100,0)	28 (65,1)		4 (66,7)	28 (68,3)	
Occupation n (%)	Professional	3 (37,5)	10 (32,3)	0,965	1 (50,0)	15 (35,7)	0,999	0 (0,0)	13 (40,6)	0,099
	Technical	3 (37,5)	13 (41,9)		0 (0,0)	10 (23,8)		4 (66,7)	12 (37,5)	
	Non-professional trades	1 (12,5)	4 (12,9)		1 (50,0)	13 (31,0)		2 (33,3)	4 (12,5)	
	Unemployed	0 (0,0)	0 (0,0)		0 (0,0)	0 (0,0)		0 (0,0)	1 (3,1)	
	Pensioner	0 (0,0)	0 (0,0)		0 (0,0)	0 (0,0)		0 (0,0)	0 (0,0)	
	Student	1 (12,5)	2 (6,5)		0 (0,0)	2 (4,8)		0 (0,0)	1 (3,1)	
	Armed forces and order	0 (0,0)	2 (6,5)		0 (0,0)	1 (2,4)		0 (0,0)	0 (0,0)	
	Artists	0 (0,0)	0 (0,0)		0 (0,0)	1 (2,4)		0 (0,0)	0 (0,0)	
	Athletes	0 (0,0)	0 (0,0)		0 (0,0)	0 (0,0)		0 (0,0)	1 (3,1)	

⊦ n(%) percentage, SDE=Standard Deviation. *p value<0,05 **p value<0,001.

Table 3. Sports and training habits of the sample, according to sex and year of MITA.

Sports and training habits	MITA 2017			MITA 2018			MITA 2019		
	Women	Men	p value	Women	Men	p value	Women	Men	p value
Sports oriented medical examination n (%)	9 (100,0)	18 (60,0)	0,29	1 (50,0)	27 (65,9)	0,581	4 (66,7)	27 (67,5)	0,649
Regular training start age mean (SD)	29,4 (15,4)	28,4 (12,7)		31,5(2,1)	23,5(11,3)	0,333	29,2 (6,6)	23,7 (8,3)	0,136
Training frequency (days/ week) mean (SD)	5,2 (1,9)	5,2 (1,8)	0,54	4,5(0,71)	4,56 (1,52)	0,64	5,1 (0,7)	4,8 (1,3)	0,441
Training duration (minutes/ session) mean (SD)	100,0 (29,8)	113,0 (38,6)	0,24	75 (21.21)	90,2 (35,69)	0,56	72,1 (15,8)	84 (36,7)	0,408
High intensity training frequency n (%)	9 (100,0)	28 (84,8)	0,28	0 (0,0)	31 (73,8)		6 (85,7)	35 (87,5)	
Other sport n (%)	2 (22,2)	13 (41,9)	0,25	1 (50,0)	18 (42,9)	0,68	4 (57,1)	19 (47,5)	0,701
Sports Club membership n (%)	7 (77,8)	18 (56,3)	0,22	0 (0,0)	22 (53,7)	0,23	6 (85,7)	23 (60,5)	0,393

n=number of subjects, (%) =percentage, SD=Standard Deviation, days/week= days per week. p values correspond to Fisher´s Exact Test.

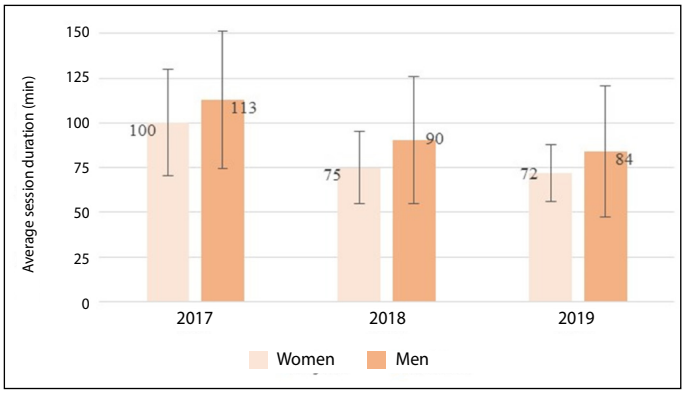

Figure 1. Mean weekly frequency (± 1 SD) of training (days), according to sex.

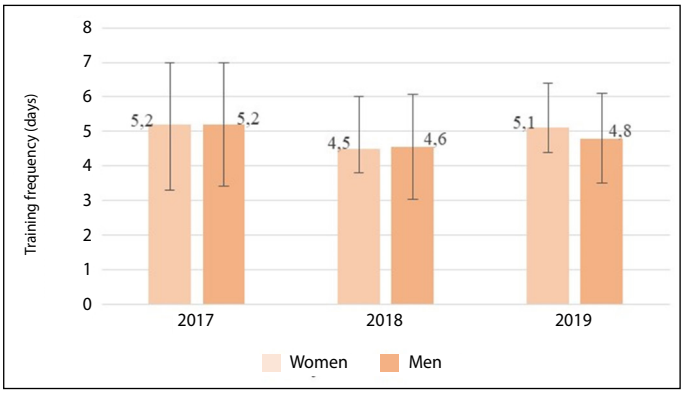

Figure 2. Mean duration (1 SD) of training sesión (minutes), by sex.

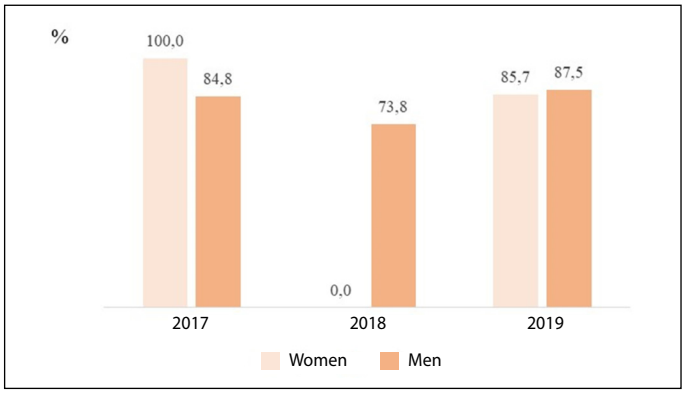

Figure 3. Percentage of runners who perform high intensity training, according to sex.

by Ruiz-Juan, in a sample of 1005 Spanish and 690 Mexican runners, 89.9% and 93.9% reported university or secondary studies.[12] A similar finding was reported by Besomi et al, in a sample of 821 Chilean runners, of which 65.6% had completed university or postgraduate studies and the remaining 34.4% declared incomplete university or technical studies.[6]

Regarding *training habits*, similar results were found in the different MITA versions, except for training session duration, which decreased compared to 2017 version. The reasons for this decrease are unknown, and it is not possible to compare this behavior with previous studies as there is no standardization in the unit to measure time variable in the literature consulted. About average training frequency, results were comparable with the data available from runners of the Zurich Marató of Barcelona.[11]

When analyzing frequency of high intensity training, more than 70% of the men reported so. This is probably for the purpose of improving marathon performance markers; however, people may not be aware that a high frequency of high intensity training risks inadequate physical and metabolic recovery, which could decrease running performance, increase the perception of fatigue and even negatively impact sleep quality.[13] It would be of interest for future research to analyze the method of planning training sessions, to confirm whether runners have the advice of a professional expert in the area.

It is noteworthy that no participant defined their occupation as "athlete", which matches a definition of a runner as someone who combines work activity with sports practice.

Worldwide there are several studies that report the profile of runners who participate in massive marathons. One of the lastest was published in 2019 and described characteristics of recreational runners in the five continents, from 1986 to 2018.[2] In Latin America, there are still few studies that characterize marathon runners. We can find studies by Ruiz and Zaraúz describing sociodemographic variables in runners in Mexico.[12] The most recent one carried out in Chile, incorporated runners, in various categories and participants of different types of events, in order to determine the profile of urban runners associated with the risk of musculoskeletal injury.[6]

In relation to female representation, low participation of women compared to men is striking (13.3% average). This same trend was reported by Zarauz-Sancho and Ruiz-Juan, who investigated 1,226 marathoners registered in the San Sebastián, Seville and Barcelona marathons in 2008 and 2009, where only 9.63% were women.[14] This low participation contrasts with the redefinition of the current role of women, whose participation has been increased in the labor and social sphere, but not in the practice of long-distance races such as marathon.[15]

Regarding age of initiation of regular training, MITA participants presents an average around 23 years old in men and close to 30 years in women. In comparison with PACE study, done over 10,954 participants (mostly Europeans), 50% between 20-60 years old reported that had been training for less than six years, and only 20% of them had been doing it for more than ten years. Even when considering the subgroup of runners between 40-60 years old, it was observed that many of them started running only after the age of 40 or even later.[5]

It would be interesting to delve into the difference reported for the age of initiation of training between Latin American versus European marathoners, and between male and female marathoners. This would allow knowing the behavioral, cultural and/or generational aspects that explain this variation.

Although marathons have become popular, motivating many people to perform high intensity workouts, it is worth considering the average age (38-40 years) and, therefore, think about the importance of counting with a cardiovascular risk profile that allows runners to know themselves and train within a safe range.

Among the main limitations of this study, it should be noted that sample was obtained using a non-probabilistic technique for convenience, allowing the selection of accessible cases that agreed to be included, which could induce a selection bias. However, it is consistent with the selection used in other studies that incorporate these variables.[6,11,12, 16]

For future research, it would be advisable to include objective measures especially for training variables,[17] and calculate a probability sample and apply the instrument online, in order to recruit a greater number of participants. It also would be advisable to describe the universe that does not agree to participate.

If we consider the difference in respondents by sex as a limitation, where the low participation of women (13.3%) stood out (even when the number of participating women was notably lower than that of men), a strategy should be generated that allows achieving a most representative number of the total of runners that avoids the overestimation of results.

CONCLUSION

This study indicate that the profile of 42K runners of an emerging and decentralized international marathon are healthy subjects, non-smokers, without comorbidities; mostly men, normal weight, average age between 38-40 years, with high educational level and workers; whose training frequency is 4.9 days/week, average duration of 89 minutes/session; and 64.7% report doing high intensity training.

Considering that in Latin America there are few studies that describe the profile of 42K marathoners, information obtained will allow the study of strategies at the local level that help raise awareness in the population regarding responsible and efficient practice of physical activity. This will minimize the risks mainly in the cardiovascular field, associated with uninformed and unplanned training.

Finally, in the current context, a new window opens to investigate how marathoners redefine their training in the health emergency situation of a COVID-19 pandemic.

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