

ORIGINAL ARTICLE



# Health and Fitness Trends in the Post-COVID-19 Era in Turkey: A Cross-Sectional Study

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## ABSTRACT

**Background.** The health and fitness industry is evolving and appears to be a dynamic space for all involved stakeholders with great potential worldwide. **Objectives.** The purpose of this observational study was to identify the most popular health and fitness trends in Turkey for the first time after the coronavirus (COVID-19) pandemic and to detect any potential differences with the recent results reported in other countries or regions. **Methods.** A national online survey was carried out, utilizing the methodology of similar international surveys conducted by the American College of Sports Medicine since 2007. Specifically, simple random sampling was used through a web-based questionnaire that was sent to 5,725 professionals who worked in the Turkish health and fitness industry. **Results.** A total of 505 responses was collected with a response rate of 8.8%. The 10 most popular health and fitness trends in Turkey in the post-COVID-19 era were exercised for weight loss, Pilates, strength training (free weights), body weight training, personal training, core training, boutique fitness studios, group training, functional fitness training, and high intensity interval training. The present results are fully aligned with those observed for the top health and fitness trends in various Southern European countries and the European region, demonstrating that trends re-lated to technology and health are not yet popular nationwide. **Conclusion.** Such findings may help gym operators/managers, exercise professionals, training providers, and educators with making critical business decisions, educational and professional development opportunities, and novel exercise concepts to strengthen customer engagement, satisfaction, loyalty and retention through engaging fitness experiences in the post-COVID-19 era.

**KEYWORDS:** Turkey, Fitness Survey, Trends, Top Programs, Top Services, ACSM Survey.

## INTRODUCTION

The health and fitness industry is now on the rise, showing huge potential for growth and is currently increasing its size in terms of facilities, members, employees and annual revenue worldwide (1). This vibrant space promotes physical activity, exercise and wellness among the masses and sees recovery after the era of the coronavirus pandemic (COVID-19) lasted

almost three years and adversely affected the entire industry. However, the vital role of regular exercise in daily life has been widely documented for decades and the positive impact of various fitness services, programs and products have been also reported in an extensive way (2). In Turkey, the number of fitness facilities has been rising rapidly, but the number

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of club members is quite low compared to developed countries. However, the Turkish health and fitness industry seems to be an emerging market, providing innovative business and professional development opportunities among employers and employees, aiming to support public health through positive exercise experiences. Programs that are relevant to women and to young adults are on the rise in order to increase the number of gym members nationwide (3). Interestingly, boutique gyms offering targeted services and programs in a luxurious environment appear to be the next generation of fitness facilities in Turkey, which is in alignment with the current status of the global health and fitness industry with respect to exercise settings with the greatest potential for growth and innovation (4). However, the rapidly increasing prevalence of physical inactivity and over-weight/obesity have been recently reported as some of the most challenging public health issues not only in Turkey but also globally. In particular, more than one in two are physically inactive, two in three are overweight, and one in three have obesity among adults in Turkey, indicating a similar epidemiological status to that reported in the Western world (5, 6). On the other hand, active lifestyle has been documented as a powerful solution for mitigating sedentarism and excess weight that acts like a magnet attracting several lifestyle-related chronic diseases worldwide (7, 8).

Turkey is the 10th most populated country in Asia and has an upper-middle income economy that is the 19th-largest in the world and the 7th-largest in Asia. Importantly, Turkey is one of the fastest-growing economies in the world and an emerging fitness market thanks to its youthful demographic profile (9). The prevalence of the most common cardiometabolic health-related chronic diseases is substantially growing nationwide, adversely affecting public health and quality of life in adults (10). It is worth mentioning that the big majority of the adult population has been impacted by common lifestyle-related chronic diseases in Turkey (10). Therefore, the rising awareness regarding the inactivity and obesity epidemics linked to major health issues appears to be a key factor enhancing the demand for fitness services and supporting a national public health policy (11). Interestingly, the Turkish health and fitness industry is currently increasing its size,

demonstrating an increased number of businesses, consumers and fitness professionals involved in this emerging market. More specifically, Turkey has 2,555 sport and fitness centers, 2.1 million club members, 7.8% membership growth rate, 2.6% penetration rate, displaying a total annual revenue of €0.82 billion EUR. However, these market figures were below-average European rates prior to the COVID-19 pandemic (12). Additionally, professional credentials and lifelong learning programs are not considered high priorities among practitioners in the Turkish health and fitness industry. Thus, a regulatory agency should be established to develop standardization for qualifications of those enter the industry, including vocational training providers and higher education institutes that provide relevant professional and academic credentials nationwide, aiming to protect the industry and its consumers by raising the bar among practitioners (13).

A global annual survey focusing on the top trends in the health and fitness industry has been carried out by the American College of Sports Medicine (ACSM) in the past 18 years. The purpose of such a research work was to identify the most popular training modalities, exercise settings and fitness services in the industry worldwide (14–30). Specifically, studies of this kind may support industry stakeholders and its consumers to consider investing in good practices that promote safe and positive exercise experiences. Interestingly, such research approaches may help gym owners and employees pay more attention to new opportunities with a focus on a new landscape associated with science-based findings and solutions (30). The current status of trends in the Turkish health and fitness industry has not been yet investigated. With this into account, it is noticeable that the lack of in-depth examination of the most attractive health and fitness trends enhances the gap between research and application at the national level. In contrast, wide-ranging investigation has been previously carried out by the ACSM, emphasizing on numerous countries and regions, gathering data and publishing comparative analyses at the international level (31–35). It is of paramount importance that several regional and national cross-sectional surveys have replicated the ACSM's methodology, spreading relevant

findings in order to increase the awareness of the most popular trends in the health and fitness industry internationally (36–44).

This cross-sectional study is the first-ever survey aiming to collect data from Turkey and compare the findings with those reported for various Southern European countries (40) and the European region (35). Only data from a Chinese survey have already published from Asia in the past (33, 35, 42). With this in mind, such a national survey will produce insights into the health and fitness trends from another Asian country, and this is important considering that Turkey has been reported as an emerging fitness market. Thus, the aims of the present study were a) to identify the most popular health and fitness trends in Turkey in the post-COVID-19 era and b) to compare these trends between various Southern European countries and the European region. In summary, this observational study may support all industry stakeholders to provide decision makers with important information, aiming to overcome the obesity and inactivity epidemics by offering positive exercise experiences and appropriate public policies with a focus on the fitness needs of the citizens at the national level.

## MATERIALS AND METHODS

**Study Design.** A cross-sectional study of health and fitness trends was conducted, using a web-based survey and a descriptive approach. The present observational study implemented the same methodology with relevant surveys carried out by the ACSM. In particular, this study applied similar criteria to those that have been extensively included in relevant national (36–44), regional (31–35), and worldwide (14–30) surveys of health and fitness trends since 2006. In the present survey, data were obtained through a national survey in order to report the key results not only at the local but also the international level. To do that, a comparison between the present findings and those recently published in other countries and regions was conducted (30, 35). In brief, the survey was developed to identify the health and fitness trends (not fads) that are considered popular because of their influence in the local industry while demonstrating the increased popularity among industry stakeholders in Turkey. Thus, a distinction between “fad” and “trend” in accordance with the dictionary was included in

the introductory part of the survey, aiming to help respondents identify the difference between these two key terms as previously reported (14–30).

**Sample Recruitment and Inclusion Criteria.** Participants aged 18 and older with any involvement in the Turkish health and fitness industry were considered eligible respondents and included in the study. Participants were mainly recruited through databases of contacts of local faculties of physical education and sports sciences and fitness chains across the country. The online survey was sent electronically to 5,725 individual contacts in total. All contacts were people highly involved in the local industry, demonstrating various occupational roles, working experiences and education levels. Additionally, several posts on social media and relevant web sites were made to increase the awareness of the survey at the national level.

**Data Collection Tool.** This cross-sectional survey implemented a broadly reputable methodology developed by the ACSM. Specifically, a group of technical experts with an extensive experience in the health and fitness space as practitioners and/or educators was recruited to identify a list of fitness trends (30). This group (n=30) of industry experts and academics from all over the world were involved in a pilot study to finalize the list of candidate health and fitness trends from which the web-based survey was developed after verifying the consistency of the questionnaire and modifications were applied accordingly (40). The reliability of the questionnaire was assessed by calculating the alpha-Cronbach’s coefficients ( $\alpha=0.74$ ). Thus, an electronic questionnaire applying an online survey platform (Google Forms) was developed, including 47 related trends that were retrieved from both several sources and experts’ personal experience. Each trend included in the questionnaire was accompanied by a brief description, helping respondents understand better each option as previously reported (30). A 10-point Likert scale ranging from 1 (least likely to be a trend) to 10 (most likely to be a trend) was used to assess the potential trends as previously described (30). No more than 15 minutes were required to complete the questionnaire, including various demographic questions regarding several characteristics, such as gender, age, region, education, certification(s),

occupation, experience, work status, work setting, and annual salary as previously articulated (30). The questionnaire was provided in Turkish with no changes from the original English version designed by the ACSM. The Turkish authors (K.K. and O.B.Ç.) of the present study were in charge of translation into local language. Afterwards, native/bilingual English speakers, with an academic background in exercise science reviewed the draft and revised it where needed, aiming to be 100% correct compared to the original English version.

**Recruitment and Study Period.** The survey was conducted electronically from May 2023 to July 2023 (12 weeks). Financial or material incentives were not offered to attract respondents to the study. Several email re-minders were sent to all database contacts during the 3-month study period. The web-based questionnaire was filled out anonymously and participants were also asked to sign a digital informed consent letter before providing their answers. The first page of the electronic survey included all mandatory specifics with regard to the research aims, the confidentiality of information and the right to withdraw the participation in the study.

**Data Analysis.** This observational study was methodologically based on several similar cross-sectional studies broadly carried out by the ACSM and international partners (14–44), and therefore data were gathered and analyzed applying quantitative methods. The accuracy of each item of data was scrutinized. The outcomes were reported using descriptive and inferential statistics, such as percentage frequency distributions, means, and standard deviations. Frequency distributions were used to check outliers and the normality of distributions. The IBM SPSS Statistics 26.0 software (IBM Corp., Armonk, NY, USA) was used to perform all descriptive analyses.

**Ethics Approval.** The study protocol, methodology, and ethics were approved by the Institutional Ethics Committee at Gazi University according to the 2013 Declaration of Helsinki. Informed consent of volunteers was obtained, confidentiality was assured, and no names were used in the survey. All data were obtained by researchers without providing access to anyone else. All procedures involving research study participants were approved by the Institutional Review Board of the Gazi University (E.632898).

## RESULTS

**Demographic Characteristics.** Results are shown in Tables 1–5. In total, the national online survey collected 505 re-sponses, which represents a return rate of 8.8%. According to the demographic characteristics (Table 1), respondents from all provinces of Turkey (37.6% females and 62.4% males) with diverse backgrounds, occupations and experience levels participated in the study. In particular, 60% of respondents had 5–9 years of professional experience in the industry and 11% had over 10 years of experience. Moreover, 51% of participants currently work as practitioners under several occupations, mostly as part-time personal trainers (28.5%), while only 17% of participants did not hold an academic credential in exercise science or a related field. Full-time work and number two career choice were stated by 90% and 48%, respectively. Lastly, 31% of respondents reported an annual salary between \$10,000 and \$12,000 USD.

**National Health and Fitness Trends.** All health and fitness trends included in the survey were ranked from highest (most popular trend) to lowest (least popular trend) mean score and are illustrated in Table 2. A comparison of the top 20 health and fitness trends among Turkey and Southern European countries and the European region is shown in Table 3. Trends were also categorized in the following six groups, as reported elsewhere (44): trends related to i) fitness professionals, ii) fitness activities, iii) training modalities, iv) programs oriented to specific populations, v) technology and iv) health. Table 4 presents a grouped approach of the comparative analysis of the top 20 health and fitness trends in Turkey and the world.

On average, exercise for weight loss was selected as the most popular trend in the Turkish health and fitness industry in the post-COVID-19 pandemic. Specifically, seven trends related to fitness activities (#2 Pilates, #3 strength training with free weights, #4 body weight training, #6 core training, #7 boutique fitness studios, #9 functional fitness training, and #10 high-intensity interval training), one related to programs oriented to specific populations (#1 exercise for weight loss), and two related to training modalities (#5 personal training and #8 group training) are included in the top 10 most attractive health and fitness trends nationwide. No trends related to technology and health were ranked

among the top 20 most attractive options in Turkey. A grouped comparative analysis of the top 10 health and fitness trends based on age, experience, career choice, and annual salary did

not show significant differences. However, female and male respondents selected Pilates and exercise for weight loss as the number one trend, respectively (Table 5).

**Table 1. Demographics of the survey respondents in Turkey**

|                           |                                    | n         | %          |
|---------------------------|------------------------------------|-----------|------------|
| <b>Gender</b>             | Female                             | 190       | 37.6       |
|                           | Male                               | 315       | 62.4       |
| <b>Age (years)</b>        | 18 – 21                            | 41        | 8.1        |
|                           | 22 – 34                            | 338       | 66.9       |
|                           | 35 – 44                            | 103       | 20.4       |
|                           | 45 – 54                            | 19        | 3.8        |
|                           | 55 – 64                            | 3         | 0.6        |
|                           | > 65                               | 1         | 0.2        |
| <b>Region</b>             | Central Anatolia (Central)         | 200       | 39.6       |
|                           | Akdeniz (Southern)                 | 14        | 2.77       |
|                           | Ege (Western)                      | 45        | 8.91       |
|                           | Marmara (Northern)                 | 207       | 40.9       |
|                           | Other                              | 39        | 7.7        |
| <b>Education</b>          | Bachelor's degree                  | 165       | 32.7       |
|                           | Master's degree                    | 135       | 26.7       |
|                           | Doctoral degree                    | 119       | 23.6       |
|                           | None                               | 86        | 17.0       |
| <b>Certification (s)</b>  | Fitness Instructor                 | 117       | 23.2       |
|                           | Group Exercise Instructor          | 62        | 12.3       |
|                           | Personal Trainer                   | 102       | 20.2       |
|                           | Pilates Teacher                    | 83        | 16.4       |
|                           | Yoga Teacher                       | 39        | 7.7        |
|                           | Aqua Fitness Instructor            | 16        | 3.2        |
|                           | Health Coach                       | 4         | 0.8        |
|                           | Exercise Physiologist              | 1         | 0.2        |
|                           | Clinical Exercise Physiologist     | 2         | 0.4        |
|                           | Not currently certified            | 35        | 6.9        |
|                           | Other                              | 44        | 8.7        |
| <b>Primary Profession</b> | Personal Trainer (part-time)       | 144       | 28.5       |
|                           | Group Exercise Instructor          | 37        | 7.3        |
|                           | Owner/Operator                     | 11        | 2.2        |
|                           | Exercise Physiologist              | 1         | 0.2        |
|                           | Vocational Educator/Tutor          | 4         | 0.8        |
|                           | Personal Trainer (full-time)       | 43        | 8.5        |
|                           | Undergraduate Student              | 12        | 2.4        |
|                           | University/College Professor       | 105       | 20.8       |
|                           | Physical Education Teacher         | 71        | 14.1       |
|                           | Pilates Teacher                    | 15        | 3.0        |
|                           | Graduate Student                   | 0         | 0.0        |
|                           | Yoga Teacher                       | 5         | 1.0        |
|                           | Health/Wellness Coach              | 13        | 2.6        |
|                           | Gym Manager                        | 8         | 1.6        |
|                           | <b>Allied Health Professionals</b> | <b>32</b> | <b>6.3</b> |
|                           | Clinical Exercise Physiologist     | 0         | 0.0        |
| Registered Dietician      | 4                                  | 0.8       |            |
| <b>Experience (years)</b> | 0 – 1                              | 22        | 4.4        |
|                           | 1 – 3                              | 43        | 8.5        |
|                           | 3 – 5                              | 83        | 16.4       |
|                           | 5 – 7                              | 146       | 28.9       |
|                           | 7 – 9                              | 156       | 30.9       |
|                           | 10 – 20                            | 46        | 9.1        |
|                           | > 20                               | 9         | 1.8        |
| <b>Work Status</b>        | Full-time                          | 454       | 89.9       |
|                           | Part-time                          | 51        | 10.1       |

Table 1. continued

| Career Choice |                               |     |      |
|---------------|-------------------------------|-----|------|
|               | First job                     | 118 | 23.4 |
|               | Second job                    | 243 | 48.1 |
|               | Third job                     | 144 | 28.5 |
| Work Setting  | Private Practice/Own business | 28  | 5.5  |
|               | University Facility           | 111 | 22   |
|               | Vocational Training Provider  | 19  | 3.8  |
|               | Boutique Fitness Studio       | 34  | 6.7  |
|               | Commercial Fitness Center     | 224 | 44.4 |
|               | National Association          | 0   | 0    |
|               | Corporate Fitness Facility    | 36  | 7.1  |
|               | Community-Based Facility      | 0   | 0    |
|               | Medical Fitness Center        | 1   | 0.2  |
|               | Supplier                      | 1   | 0.2  |
|               | Sport Tourism Facility        | 2   | 0.4  |
|               | Other                         | 49  | 9.7  |
| Other         | 49                            | 9.7 |      |
|               | < 4,000                       | 46  | 9.1  |
|               | 4,000 – 5,999                 | 26  | 5.1  |
|               | 6,000 – 7,999                 | 46  | 9.1  |
|               | 8,000 – 9,999                 | 29  | 5.7  |
|               | 10,000 – 11,999               | 154 | 30.5 |
|               | 12,000 – 13,999               | 66  | 13.1 |
|               | 14,000 – 15,999               | 112 | 22.2 |
|               | ≥ 16,000                      | 26  | 5.1  |

Table 2. Comprehensive ranking of health and fitness trends in Turkey

| #  | Trend  | Score*    |
|----|--|-----------|
| 1  | Exercise for Weight Loss                         | 8.30±2.07 |
| 2  | Pilates  | 8.24±2.03 |
| 3  | Strength Training (Free Weights)                 | 7.82±2.37 |
| 4  | Body Weight Training                             | 7.68±2.12 |
| 5  | Personal Training                                | 7.35±2.48 |
| 6  | Core Training                                    | 7.16±2.42 |
| 7  | Boutique Fitness Studios                         | 7.15±2.50 |
| 8  | Group Training                                   | 7.04±2.57 |
| 9  | Functional Fitness Training                      | 6.98±2.24 |
| 10 | High Intensity Interval Training                 | 6.74±2.46 |
| 11 | Resistance Band Training                         | 6.59±2.36 |
| 12 | Balance and Stabilization Training               | 6.51±2.53 |
| 13 | Licensure for Fitness Professionals              | 6.47±2.51 |
| 14 | Circuit Training                                 | 6.38±2.54 |
| 15 | High-Intensity Functional Training               | 6.31±2.47 |
| 16 | Small Group Training                             | 6.30±2.49 |
| 17 | Walking/Running/Jogging/Cycling Clubs            | 6.27±2.33 |
| 18 | Exercise is Medicine                             | 6.19±3.14 |
| 19 | Outcome Measurements                             | 6.11±2.66 |
| 20 | Low-cost and Budget Gyms                         | 6.01±2.69 |
| 21 | Wearable Technology                              | 6.00±2.75 |
| 22 | Mobility/Myofascial Devices/Rollers and Recovery | 5.99±2.54 |
| 23 | Outdoor Activities                               | 5.98±2.61 |
| 24 | Employing Certified Fitness Professionals        | 5.96±2.63 |
| 25 | Health/Wellness Coaching                         | 5.93±2.81 |
| 26 | Stretching Training                              | 5.91±2.66 |
| 27 | Yoga   | 5.90±2.79 |
| 28 | Plyometric Training                              | 5.89±2.67 |
| 29 | Medicine Ball Training                           | 5.83±2.40 |
| 30 | Dance-based Workouts                             | 5.79±2.60 |
| 31 | Home Exercise Gyms                               | 5.70±2.87 |
| 32 | Children and Exercise                            | 5.60±2.86 |
| 33 | Mobile Exercise Apps                             | 5.59±2.97 |
| 34 | Clinical Integration/Medical Fitness             | 5.48±2.85 |

\*: Scores are expressed as mean values±standard deviation.

Table 2. continued

|    |  |           |
|----|--|-----------|
| 35 | Long-term Youth Development                | 5.43±2.92 |
| 36 | Post Rehabilitation Classes                | 5.42±2.88 |
| 37 | Lifestyle Medicine                         | 5.38±2.93 |
| 38 | Mind-body Movement                         | 5.22±2.77 |
| 39 | Online Personal Training                   | 5.12±2.95 |
| 40 | Fitness Programs for Older Adults          | 4.96±2.90 |
| 41 | Pre- and Post-Natal Fitness                | 4.95±2.86 |
| 42 | Online Live and On-Demand Exercise Classes | 4.69±2.85 |
| 43 | Aquatic Exercise                           | 4.60±3.05 |
| 44 | Electrical Muscle Stimulation Training     | 4.23±2.92 |
| 45 | Worker Incentive Programs                  | 4.02±2.87 |
| 46 | Worksite Health Promotion Programs         | 3.90±2.85 |
| 47 | Virtual Reality Exercise Training          | 3.86±2.99 |

\*: Scores are expressed as mean values±standard deviation.

Table 3. Comparative analysis of the top 20 health and fitness trends among Turkey, various Southern European countries and Europe

| # | Turkey                           | Italy [35]   | Spain [35]   | Portugal [35]  | Greece [35]                                    | Cyprus [35]  | Europe [40]                                    |
|---|----------------------------------|--|--|--|--|--|--|
| 1 | Exercise for Weight Loss         | Post-Rehabilitation Classes                            | Functional Fitness Training                              | Licensure for Fitness Professionals                    | Personal Training                              | Exercise is Medicine                                   | Body Weight Training                           |
| 2 | Pilates                          | Personal Training                                      | Small Group Training                                     | Employing Certified Fitness Professionals <sup>2</sup> | High-Intensity Interval Training               | Licensure for Fitness Professionals                    | Exercise for Weight Loss                       |
| 3 | Strength Training (Free Weights) | Exercise is Medicine                                   | Personal Training  | Personal Training                                      | Small Group Training                           | Personal Training                                      | Personal Training                              |
| 4 | Body Weight Training             | Clinical Integration/ Medical Fitness <sup>2</sup>     | Employing Certified Fitness Professionals <sup>s 2</sup> | Exercise for Weight Loss                               | Functional Fitness Training                    | Children and Exercise <sup>2</sup>                     | Fitness Programs for Older Adults <sup>2</sup> |
| 5 | Personal Training                | Employing Certified Fitness Professionals <sup>2</sup> | Strength Training (Free-Weights)                         | Lifestyle Medicine <sup>2</sup>                        | Exercise for Weight Loss                       | Fitness Programs for Older Adults <sup>2</sup>         | Functional Fitness Training                    |
| 6 | Core Training                    | Long-term Youth Development <sup>2</sup>               | Exercise and Weight Loss                                 | Health/Wellness Coaching <sup>2</sup>                  | High-Intensity Functional Training             | Functional Fitness Training                            | High-Intensity Interval Training               |
| 7 | Boutique Fitness Studios         | Children and Exercise <sup>2</sup>                     | Fitness Programs for Older Adults <sup>2</sup>           | Exercise is Medicine                                   | Body Weight Training                           | Employing Certified Fitness Professionals <sup>2</sup> | Boutique Fitness Studios                       |
| 8 | Group Training                   | Fitness Programs for Older Adults <sup>2</sup>         | Multidisciplinary Work Teams <sup>1</sup>                | Strength Training (Free Weights)                       | Fitness Programs for Older Adults <sup>2</sup> | Health/Wellness Coaching <sup>2</sup>                  | Circuit Training                               |
| 9 | Functional Fitness Training      | Outdoor Activities <sup>2</sup>                        | Licensure for Fitness Professionals <sup>s</sup>         | Outcome Measurements                                   | Exercise is Medicine                           | Post-Rehabilitation Classes <sup>2</sup>               | Exercise is Medicine                           |

<sup>1</sup> appearance only in Turkey, <sup>2</sup> non-appearance in Turkey.

| 10 | High-Intensity Interval Training                   | Worksite Health Promotion Programs <sup>2</sup> | Outdoor Activities <sup>2</sup>                 | Outdoor Activities <sup>2</sup>                | Group Training   | Small Group Training                               | Employing Certified Fitness Professionals <sup>2</sup> |
|----|--|---|---|--|--|--|--|
| 11 | Resistance Band Training <sup>1</sup>              | Licensure for Fitness Professionals             | High-Intensity Interval Training                | Functional Fitness Training                    | Pilates  | Circuit Training                                   | Strength Training (Free Weights)                       |
| 12 | Balance and Stabilization Training                 | Exercise for Weight Loss                        | Post-Rehabilitation Classes <sup>2</sup>        | Body Weight Training                           | Boutique Fitness Studios                               | Body Weight Training                               | Wearable Technology <sup>2</sup>                       |
| 13 | Licensure for Fitness Professionals                | Pre- and Post-Natal Fitness <sup>2</sup>        | Fitness and Nutrition <sup>2</sup>              | Fitness Programs for Older Adults <sup>2</sup> | Strength Training (Free Weights)                       | Group Training                                     | High-Intensity Functional Training                     |
| 14 | Circuit Training                                   | Lifestyle Medicine <sup>2</sup>                 | Body Weight Training                            | Body-Mind Movement <sup>2</sup>                | Outdoor Activities                                     | Exercise for Weight Loss                           | Outdoor Activities <sup>2</sup>                        |
| 15 | High-Intensity Functional Training                 | Health/Wellness Coaching <sup>2</sup>           | Injury Prevention/Functional Rehab <sup>2</sup> | High-Intensity Interval Training               | Circuit Training                                       | Pilates  | Clinical Integration/ Medical Fitness <sup>2</sup>     |
| 16 | Small Group Training                               | Outcome Measurements                            | Group Training                                  | Post-Rehabilitation Classes <sup>2</sup>       | Licensure for Fitness Professionals                    | Strength Training (Free Weights)                   | Small Group Training                                   |
| 17 | Walking/Running/Jogging/Cycling Clubs <sup>1</sup> | Functional Fitness Training                     | Outcome Measurements                            | Pilates  | Health/Wellness Coaching <sup>2</sup>                  | High-Intensity Interval Training                   | Children and Exercise <sup>2</sup>                     |
| 18 | Exercise is Medicine                               | Balance and Stabilization Training              | Core Training                                   | Wearable Technology <sup>2</sup>               | Employing Certified Fitness Professionals <sup>2</sup> | Core Training                                      | Licensure for Fitness Professionals                    |
| 19 | Outcome Measurements                               | Stretching Training <sup>2</sup>                | Mobile Exercise Apps <sup>2</sup>               | High-Intensity Functional Training             | Wearable Technology <sup>2</sup>                       | Clinical Integration/ Medical Fitness <sup>2</sup> | Pilates  |
| 20 | Low-cost and Budget Gyms <sup>1</sup>              | Strength Training (Free Weights)                | Exercise is Medicine                            | Group Training                                 | Core Training  | Lifestyle Medicine <sup>2</sup>                    | Group Training   |

<sup>1</sup> appearance only in Turkey, <sup>2</sup> non-appearance in Turkey.

**International Comparisons.** Comparing the top 20 Turkish health and fitness trends with the Southern European and Pan-European ones recently published after the COVID-19 pandemic, there are six trends that are included only in the European list (fitness programs for older adults, employing certified fitness professionals, wearable technology, outdoor activities, clinical

integration/medical fitness, and children and exercise). Similarly, comparing the top 10 Turkish options with those observed in Southern European countries (e.g., Spain, Italy, Portugal, Greece, and Cyprus), several aforementioned health and fitness trends present at the international level were not included in the Turkish top selections.



**Table 4. A grouped comparative analysis of the top 20 fitness trends in Turkey and the world**

| #  | Turkey                                     | #  | World [30]   |
|--|--|----|--|
| <b>Trends related to fitness professionals</b>                     |  |    |  |
| 13   | Licensure for Fitness Professionals        | 9  | Employing Certified Fitness Professionals <sup>2</sup> |
|  |  | 18 | Licensure for Fitness Professionals                    |
| <b>Trends related to fitness activities</b>                        |  |    |  |
| 2  | Pilates <sup>1</sup>                       | 2  | Strength Training (Free Weights)                       |
| 3  | Strength Training (Free Weights)           | 3  | Body Weight Training                                   |
| 4  | Body Weight Training                       | 5  | Functional Fitness Training                            |
| 6  | Core Training                              | 6  | Outdoor Activities <sup>2</sup>                        |
| 7  | Boutique Fitness Studios <sup>1</sup>      | 7  | High-Intensity Interval Training                       |
| 9  | Functional Fitness Training                | 11 | Core Training  |
| 10   | High-Intensity Interval Training           | 12 | Circuit Training                                       |
| 11   | Resistance Band Training <sup>1</sup>      | 13 | Home Exercise Gyms <sup>2</sup>                        |
| 17   | Walking/Running/Cycling Clubs <sup>1</sup> | 17 | Yoga <sup>2</sup>                                      |
| 20   | Low-cost and Budget Gyms <sup>1</sup>      |    |  |
| <b>Trends related to training modalities</b>                       |  |    |  |
| 5  | Personal Training                          | 10 | Personal Training                                      |
| 8  | Group Training                             | 14 | Group Training   |
| 16   | Small Group Training                       | 19 | Health/Wellness Coaching <sup>2</sup>                  |
| <b>Trends related to programs oriented to specific populations</b> |  |    |  |
| 1  | Exercise for Weight Loss                   | 4  | Fitness Programs for Older Adults <sup>2</sup>         |
|  |  | 8  | Exercise for Weight Loss                               |
| <b>Trends related to technology</b>                                |  |    |  |
|  |  | 1  | Wearable Technology <sup>2</sup>                       |
|  |  | 20 | Mobile Exercise Apps <sup>2</sup>                      |
| <b>Trends related to health</b>                                    |  |    |  |
|  |  | 15 | Exercise is Medicine                                   |
|  |  | 16 | Lifestyle Medicine <sup>2</sup>                        |

<sup>1</sup>: appearance only in Turkey, <sup>2</sup>: appearance only in the worldwide survey.

**Table 5. A grouped comparative analysis of top 10 fitness trends in Turkey based on age, experience, career choice and annual salary.**

| Sex            |                    | Age                |             | Experience        |             | Career choice               |             | Annual salary        |             |
|----------------|--------------------|--------------------|-------------|-------------------|-------------|-----------------------------|-------------|----------------------|-------------|
| Female (n=190) |                    | < 35 years (n=379) |             | <10 years (n=450) |             | First Job (n=118)           |             | < \$8000 USD (n=118) |             |
| Trend          | Score <sup>1</sup> | Trend              | Score       | Trend             | Score       | Trend                       | Score       | Trend                | Score       |
| Pilates        | 8.547±1.644        | ExWL               | 8.258±2.103 | Pilates           | 8.228±2.067 | ExWL                        | 8.059±2.350 | ExWL                 | 8.449±1.892 |
| ExWL           | 8.442±1.889        | Pilates            | 8.171±2.116 | ExWL              | 8.226±2.121 | Pilates                     | 7.830±2.447 | Pilates              | 8.237±2.166 |
| STFW           | 7.863±2.185        | STFW               | 7.704±2.482 | STFW              | 7.751±2.401 | STFW                        | 7.644±2.629 | BWT                  | 7.889±2.053 |
| BWT            | 7.715±2.021        | BWT                | 7.654±2.132 | BWT               | 7.651±2.150 | BWT                         | 7.542±2.315 | STFW                 | 7.661±2.491 |
| Core T         | 7.363±2.232        | PT                 | 7.398±2.502 | PT                | 7.320±2.518 | PT                          | 7.177±2.694 | PT                   | 7.508±2.520 |
| BFS            | 7.226±2.426        | GExT               | 7.139±2.585 | BFS               | 7.166±2.512 | Core T                      | 6.923±2.407 | Core T               | 7.322±2.349 |
| PT             | 7.036±2.514        | Core T             | 7.092±2.443 | Core T            | 7.075±2.453 | FFT                         | 6.915±2.412 | GExT                 | 7.296±2.737 |
| GExT           | 7.021±2.418        | BFS                | 7.065±2.538 | GExT              | 7.033±2.584 | GExT                        | 6.889±2.662 | FFT                  | 7.135±2.214 |
| FFT            | 6.721±2.277        | FFT                | 6.918±2.275 | FFT               | 6.940±2.256 | BFS                         | 6.822±2.725 | BFS                  | 7.101±2.512 |
| BST            | 6.626±2.430        | HIIT               | 6.707±2.461 | HIIT              | 6.673±2.478 | HIIT                        | 6.694±2.593 | HIIT                 | 6.822±2.416 |
| Male (n=315)   |                    | ≥ 35 years (n=126) |             | ≥ 10 years (n=55) |             | Second or Third Job (n=386) |             | ≥ \$8000 USD (n=387) |             |
| ExWL           | 8.222±2.172        | Pilates            | 8.452±1.764 | ExWL              | 8.945±1.470 | ExWL                        | 8.380±1.978 | ExWL                 | 8.261±2.123 |
| Pilates        | 8.057±2.222        | ExWL               | 8.444±1.974 | STFW              | 8.436±2.034 | Pilates                     | 8.367±1.882 | Pilates              | 8.242±1.998 |
| STFW           | 7.803±2.481        | STFW               | 8.190±1.970 | Pilates           | 8.345±1.776 | STFW                        | 7.883±2.291 | STFW                 | 7.876±2.335 |
| BWT            | 7.663±2.187        | BWT                | 7.769±2.105 | BWT               | 7.945±1.899 | BWT                         | 7.735±2.058 | BWT                  | 7.620±2.144 |
| PT             | 7.549±2.457        | BFS                | 7.468±2.392 | Core T            | 7.927±1.989 | PT                          | 7.409±2.426 | PT                   | 7.310±2.480 |
| FFT            | 7.149±2.213        | Core T             | 7.396±2.342 | PT                | 7.654±2.229 | BFS                         | 7.279±2.427 | BFS                  | 7.186±2.507 |
| BFS            | 7.130±2.556        | PT                 | 7.230±2.453 | FFT               | 7.381±2.129 | Core T                      | 7.256±2.410 | Core T               | 7.121±2.442 |
| GExT           | 7.063±2.666        | FFT                | 7.198±2.146 | HIIT              | 7.290±2.290 | GExT                        | 7.108±2.537 | GExT                 | 6.971±2.520 |

|        |             |      |             |      |             |      |             |      |             |
|--------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|
| Core T | 7.050±2.523 | BST  | 6.880±2.225 | BST  | 7.181±2.203 | FFT  | 7.010±2.196 | FFT  | 6.943±2.254 |
| HIIT   | 6.882±2.503 | HIIT | 6.841±2.480 | GExT | 7.163±2.507 | HIIT | 6.764±2.422 | HIIT | 6.715±2.481 |

GExT: Group Exercise Training, STFW: Strength Training (Free Weights), ExWL: Exercise for Weight Loss, BWT: Body Weight Training, Core T: Core Training, BFS: Boutique Fitness Studios, PT: Personal Training, FFT: Functional Fitness Training, BST: Balance and Stabilization, HIIT: High-Intensity Interval Training. <sup>1</sup>: Scores are expressed as mean±standard deviation.

## DISCUSSION

**Summary of main findings.** An online survey focusing on the top health and fitness trends in Turkey was carried out for the first time, aiming to help all industry stakeholders identify the most popular trends associated with particular fitness services and programs. Moreover, research of this kind may help gym owners/managers, exercise professionals, educators, and suppliers to enhance customer engagement and experience by promoting evidence-based practices and relevant training concepts in this emerging market. In Turkey, exercise for weight loss, Pilates, strength training (free weights), body weight training, personal training, core training, boutique fitness studios, group training, functional fitness training, and high intensity interval training were identified as the top 10 health and fitness trends in the post-COVID-19 era (Table 2). Importantly, 50% of the top 20 options were trends related to fitness activities associated with various exercise types and settings. Trends related to fitness modalities and specific populations were equally popular, having two trends each in the top 20. On the contrary, technology- and health-oriented trends demonstrated very low popularity nationwide, since no relevant trends were ranked among the top 20 most attractive selections. Interestingly, mind-body fitness modalities, such as yoga (#27) and mind-body movement (#38) showed low attractiveness, but Pilates (#2) was ranked exceptionally high in Turkey. However, wearable technology (#21), employing certified exercise professionals (#24), clinical integration/medical fitness (#34), post-rehabilitation classes (#36), and fitness programs for older adults (#40) showed poor popularity among respondents compared to other international surveys, given that these trends were not included in top 20 as recently reported in similar cross-sectional studies carried out in other countries and regions (Table 3).

**What is most popular?** The results of the first-ever Turkish survey of health and fitness trends replicating the ACSM's methodology (30) exhibit several similarities and differences with outcomes reported in other recently published studies of this kind, aiming to identify trends in the health and

fitness industry of various countries (36-44) and regions (31-35). On average, exercise for weight loss and Pilates were ranked #1 and #2 in this national survey, respectively, which is a result that does not fully agree with the main findings reported in other international surveys (30, 35). These particular trends were also detected as the number one and two selections in almost all subgroup analyses based on sex, age, experience, career choice and annual salary. Specifically, females ranked Pilates #1 compared to males (#2) in Turkey. However, exercise for weight loss appears to be a popular area for fitness businesses and practitioners serving clients in larger bodies within various exercise settings, given that this trend is currently included in the top health and fitness trends in Italy (#12), Spain (#6), Portugal (#4), Greece (#5), Cyprus (#14), Australia (#18), Brazil (#2), China (#1), Europe (#2), Mexico (#1), the United States (#8), and worldwide (#8) (30, 34, 40, 42). Exercise for weight loss appears popular not only in Turkey but also worldwide. A large amount of evidence shows that exercise for weight loss may be a top priority for the masses due to the increasing prevalence of overweight and obesity around the globe (7, 8). With that being said, training programs adapted for individuals living in larger bodies appear to be an attractive area for practitioners and entrepreneurs targeting this particular clientele that is characterized by special psychophysiological features and is growing at an alarming rate worldwide (6).

**Exercise professionals: Are they frontline players?** According to the present results, trends related to fitness professionals, such as licensure for fitness professionals (#13) and employing certified fitness professionals (#24) do not appear very attractive in Turkey, since both were not ranked among the top 10 health and fitness trends nationwide. On the contrary, these trends have been reported popular in other international surveys (29, 34), indicating some major differences between Turkey and other countries with respect to criteria exercise professionals should meet for being eligible to work in the industry. Interestingly, 83% of responders in this national survey held at least an undergraduate

degree in exercise science or a related field and 50% also held a relevant postgraduate degree (Table 1). This observation underlines the current status of the Turkish health and fitness industry with regard to the profile of exercise professionals involved in fitness services. Taking also into account that the fitness profession is not regulated in Turkey, academic credentials may be a usual path for those seeking to work in the industry, despite the fact that a nationally accredited certification by the Turkish Ministry of Youth and Sports is an additional option. Noticeably, well-trained practitioners specializing in populations living with controlled lifestyle-related chronic diseases are critical for public health, since there is a growth of such chronic conditions globally (6, 10). However, professional credentials and continuing education programs do not appear to be established policies and popular professional development strategies among practitioners in Turkey (13), although that a significantly high percentage of the adult population not only in Turkey but also in several Southern European countries are not considered apparently healthy individuals (5, 6, 10). In general, licensure for fitness professionals demonstrates some attractiveness among responders and this is important given that regulation and licensure requirements may raise the bar in the local health and fitness industry, aiming to protect the public and elevate the quality of fitness services across the country. Such a strategy may promote higher standards for all industry stakeholders, especially the exercise professionals serving the masses in the field and promoting the vital role of regular exercise in health, fitness, and well-being through inclusive and innovative fitness services and programs (45-48).

#### **Fitness activities: What is trending?**

Interestingly, 70% of the Turkish top 10 trends were related to various fitness activities. In particular, Pilates, strength training (free weights), body weight training, core training, boutique fitness studios, functional fitness training, high-Intensity interval training, resistance band training, walking/running/cycling clubs, low-cost and budget gyms were selected as the most attractive. Noteworthy, some fitness activities (e.g., resistance band training, walking/running/cycling clubs, low-cost and budget gyms) included in the top 20 trends in Turkey were not ranked among the most popular in other countries and regions (Table 3). However, the big majority of trends related to

fitness activities were ranked as some of the most important, which is in agreement with results reported in all available international surveys to date. On the other hand, several health- and technology-related trends were popular in other international surveys, but not in Turkey. Likewise, exercise settings of the next generation, such as boutique fitness studios (#7) and low-cost and budget gyms (#20) are present on the top trends list in Turkey, but not internationally (Table 3). These findings cannot be explained here. However, the high popularity of some fitness activities (strength training with free weights, body weight training, Pilates, and functional fitness training) and training modalities (personal training, small group training, and group training) that are the primary services and programs delivered in boutique gyms, low-cost/budget gyms, and targeted fitness studios may highlight the explanations behind these particular observations with respect to the status of the trends in the Turkish health and fitness industry. Notably, fitness studios are on the rise among fitness facility types in regions where the health and fitness industry is characterized by maturity and well-developed business context (1, 2). It is worth mentioning that personal training studios have been reported as the workplace with the greatest potential for growth in Europe (49). This particular exercise setting seems to be a promising business area in emerging markets, including Turkey (3), since boutique studios offer targeted fitness services whereas low-cost and budget gyms offer affordable membership packages mainly in low- and middle-income countries (2). This is an important outcome given that such fitness facilities seek to enhance customer engagement, satisfaction, loyalty and retention among gym members who are primarily interested in engaging in resistance- and aerobic-based training programs (50). This finding is in line with the results recently reported in several national, regional, and global surveys (30-35). Moreover, non-traditional fitness activities, such as body weight training (#4), core training (#6), functional fitness training (#9), high-intensity interval training (#10), and balance training (#12) were selected as some of the most popular fitness activities in Turkey. This observation may be supported by recent scientific data underlining the efficient role of multicomponent fitness programs in health, fitness and wellness in real-world gym settings (51-53). Another important outcome from the Turkish survey that should be taken into

consideration is the high ranking of Pilates (#2) as a trend related to mind-body fitness space. Interestingly, other mind-body fitness activities, such as yoga (#27) and mind-body movement (#38) were ranked very low in the present study, showing that mind-body fitness is not yet established nationwide. These alter-native fitness activities, especially Pilates, were not always present in the top 20 health and fitness trends in other countries and regions (Table 3) and this is an observation that may need further examination in the future. However, such alternative fitness activities appear to be some inclusive and feasible exercise options among gym members and exercise professionals around the globe, promoting positive alterations in various psychophysiological indicators (54-56).

**Which training modality is the most popular?** Personal training has been selected as the most popular training modality (#5) whereas group (#8) and small group (#16) training were ranked lower in Turkey after the COVID-19 pandemic. Such a finding coincides the outcomes recently observed in other international surveys (30, 35, 40). According to the current evidence, private exercise setting may be more promising than semi-private or group exercise setting internationally (Table 3). Fitness markets from low- and middle-income countries are usually under pressure regarding the personal and small group training services, since client-centered fitness concepts are not always affordable for consumers living in emerging and/or developing fitness markets in comparison with self-paced or group-based training programs (57, 58). Hence, traditional, non-personalized fitness activities, such as strength training with free weights (#3) and cardio-based group training programs (#8) appear to be popular in Turkey. On the contrary, private and semi-private exercise settings are attractive to consumers in both Europe (57, 59) and globally (1, 4), creating a new landscape in the health and fitness space by offering engaging and customized exercise experiences (60). Interestingly, the occupational role of trainer delivering one-on-one fitness services has been reported as one of the most promising professions within the European health and fitness industry (49, 60). In the Turkish survey, on average, personal training ranked as popular (#5) as in other international surveys, showing that the profession of personal trainer is currently on the rise (Table 3). Such an outcome may be supported by the fact that Turkey is an

emerging fitness market following the top trends present mostly in Europe but also worldwide, aiming to create more business space for personalized fitness services. Furthermore, health/wellness coaching demonstrates the low popularity in Turkey, and this remark may be associated with the fact that fitness trends related to health were fully absent from top 20 in Turkey compared to other national, regional (Table 3) and worldwide surveys in the post-COVID-19 era (Table 4).

**What is no longer popular?** In Turkey, the large majority of the adult population present with physical inactivity, overweight/obesity and several obesity-related chronic diseases (10); however, no health-related trends were present on the top 20 list nationwide (Table 4). According to the World Health Organization, Turkey demonstrates a similar country health profile to that observed in various Southern European countries (10). Nevertheless, exercise for weight loss has been selected as the most popular trend in the present survey, showing the high demand of obesity-related fitness services and programs focusing on individuals struggling with excessive weight. Interestingly, this particular trend was the only trend related to programs oriented to specific populations included in the top 20 Turkish health and fitness trends (Table 4). It is of note that fitness programs for older adults do not appear popular in Turkey compared to the Southern European, Pan-European and global survey (Tables 3 and 4). This finding can be explained by the youthful demographic country's profile (9), indicating that seniors are not considered an impactful clientele in Turkey, and therefore fitness programs and products attracting young adults are systematically growing in the fitness market nationwide (3). However, exercise for weight loss seems to be a business space with huge potential not only in Turkey but also worldwide, displaying an enormous popularity among industry stakeholders in numerous countries and regions (30, 35, 40). On the other hand, health-related fitness services are not considered powerful nationwide, since various trends included in this particular category, such as post-rehabilitation classes, exercise is medicine, lifestyle medicine, and clinical integration/medical fitness were not selected among the top 20 health and fitness trends in Turkey in comparison with other international surveys (Tables 3 and 4).

Noteworthy, the influential role of technology in the expansion of the health and fitness industry globally has been well reported, indicating that social media, mobile apps, online services and state-of-the-art equipment can be meaningfully important factors for progressing new trends in the health and fitness space around the globe (61). However, trends related to technology, such as wearable technology, outcome measurements, online personal training, mobile exercise apps, virtual reality exercise training, online live and on-demand exercise classes and electrical muscle stimulation training were not included in the top 20 in Turkey. This observation corroborates the outcomes reported in several international studies identifying the popularity of technology-oriented trends at the national (36-44) and regional level (31-35), but not the global one (30) (Tables 3 and 4). The present findings underline that technology-related fitness services and programs do not currently have an impactful role in the Turkish health and fitness industry, since digital fitness services do not show high attractiveness among industry stakeholders nationwide. This remark agrees with the primary findings reported in a Southern European survey (Table 3), highlighting that health and fitness trends related to technology are not yet largely popular in Turkey. This finding cannot be explained here, and thus further investigation is needed in this direction in order to identify the key factors behind the limited impact of technology in recognizing new trends in the Turkish health and fitness industry. However, remote fitness services have been widely used during the COVID-19 pandemic, showing that there is a lot of room for improvements and progress in the digital era within the health and fitness industry. Such innovative services may be a beneficial strategy for increasing convenience, inclusivity and uniqueness among consumers who are seeking to engage in fitness activities and programs in a digital way (62, 63).

**The influence of COVID-19.** Given that the health and fitness industry has been unusually impacted by the COVID-19 pandemic worldwide, the connection between technology and fitness was seriously strong during a long-term global health crisis (1). However, the digitalization of the global health and fitness industry happened in a rapid and aggressive way, aiming to transform the current status of fitness services and engage consumers as much as possible in virtual programs, which was something totally unusual until that time. Such an

unpredictable context enhanced non-traditional fitness services, aiming to establish a virtual exercise setting through live and/or recorded programs for various populations. In general, the intention to use fitness app substantially increased in 2020–2023 worldwide (64) whereas digital transformation is currently in progress in Turkey (65), demonstrating that fitness clubs seek to offer web-based services and innovative virtual exercise programs. Additionally, outdoor activities were popular during the COVID-19 pandemic, since fitness clubs adopted numerous restrictions in order to accommodate in-person services globally (30, 35). However, this particular trend does not appear to retain its popularity after that provocative period, since it has not been ranked among the top 20 health and fitness trends in Turkey compared to other international surveys (Tables 3 and 4). In Turkey, outdoor activities have not been selected as one of the most popular options, indicating that such fitness activities are no longer attractive nationwide. On the other side, walking, running, and cycling (#17) were considered moderately popular in the present study. Given that this trend is a convenient, affordable and enjoyable fitness activity, its popularity may be associated with the fact that the running movement rapidly gains supporters around the globe (66). Interestingly, group training had been significantly affected by the COVID-19 pandemic due to rigorous hygiene protocols and restrictions, and therefore it demonstrated low popularity worldwide in 2020–2022 (30, 34, 35). Instead, group training is now popular again not only in Turkey but also internationally (Tables 3 and 4), since that fitness club members are encouraged to participate in group-based fitness activities after a 3-year cessation.

**Strengths and limitations.** This observational study, has several limitations based on the nature of the research design and methodology i.e., difficulties in determining causal effects, cohort differences, and potential report biases as previously reported (37, 38, 40). In particular, the sampling process demonstrated a lack of randomization and potential coverage errors appear to be the major weaknesses of the present cross-sectional study. In addition, no incentive (financial or material) was offered in order to attract respondents, which is a common strategy in research of this kind, aiming to gather more data through a web-based survey. On the contrary, the replication of the ACSM's

methodology extensively used in similar international surveys may be the primary strength of the Turkish survey, highlighting a high degree of standardization that may decrease potential bias commonly observed in this type of observational studies. The fact that respondents were based in all regions of the country provides important summarized data for Turkey which may be an additional strength of this national survey. However, future research in this direction may need a larger sample size. In summary, Turkey is now included in a list of countries and regions that conduct this type of observational studies on an annual basis, aiming to summarize results and compare main findings over time. This national survey may have a beneficial impact on the evolution of relevant services, programs and products in the Turkish health and fitness industry, and therefore it may be critical to continue with this research attempt in the coming years at the national level.

**Implications for future research.** Further research should certainly benefit the investigation in this particular field in order to identify whether consumers' opinions vary from the present findings in Turkey and other countries or regions. Future research in this direction may be a catalyst in the local health and fitness industry, aiming to disseminate the message that a physically active lifestyle incorporating evidence-based exercise solutions should be a top priority for citizens living in a country facing many healthcare challenges due to a sedentary lifestyle. Notably, the majority of fitness club members in Turkey are currently young adults seeking to be healthy and have a fit body (3). Likewise, a healthy lifestyle, physical appearance, social relationship and stress reduction have been reported some additional reasons people join fitness clubs in Turkey (67, 68). In general, various psychological, socio-cultural and demographic factors may play an important role in customer engagement. Satisfaction and loyalty in the Turkish health and fitness industry (3, 69). That being said, future research attempts connecting the aforementioned factors with the top trends among consumers may be an important step in a new direction. Such an approach may help industry stakeholders are greatly aware of the consumers' opinions and preferences with respect to services, programs and products in the health and fitness context.

## CONCLUSION

The main findings from the first-ever cross-sectional study focusing on health and fitness trends in Turkey may help entrepreneurs, practitioners, educators, and consumers in making important decisions related to fitness services, programs and products. On average, exercise for weight loss was the most popular trend nationwide in the post-COVID-19 era. This outcome is fully aligned with current results from other recently published international surveys. This national survey delivers the opportunity to identify important comparisons among Turkey and Southern European countries, as well as the European region, aiming to provide insights into the most popular health and fitness trends associated with several business concepts and professional development opportunities within the health and fitness space internationally. Considering that common lifestyle-related chronic diseases are systematically increasing not only in Turkey but also worldwide, the aim of this national survey was to support industry stakeholders on how to develop and implement safe, efficient, and pleasant fitness services related to the top industry trends. Given that the health and fitness industry is a vibrant and evolving business space requiring all involved parties to be continually updated and to use good practices within a multilayered and competitive area, the translation of the present outcomes into client-centered services may enhance positive exercise experiences in the Turkish health and fitness industry.

## APPLICABLE REMARKS

- Intricating the current status of the Turkish health and fitness industry in terms of the top fitness programs, services and products in the post-COVID-19 period.
- Supporting health and fitness industry stakeholders on how to develop and implement safe, efficient and pleasant fitness services related to the top industry trends.
- Translating the present outcomes into client-centered services may enhance positive exercise experiences nationwide.

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## AUTHORS' CONTRIBUTIONS

Study concept and design: Alexios Batrakoulis. Acquisition of data: Kadir Keskin, Okan Burçak Çelik. Analysis and interpretation of data: Alexios Batrakoulis, Kadir Keskin, Saeid Fatolahi, Okan Burçak Çelik, Sameer Badri Al-Mhanna, Farnaz Dinizadeh. Drafting the manuscript: Alexios Batrakoulis. Critical revision of the manuscript for important intellectual content: Alexios Batrakoulis, Kadir Keskin, Saeid

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## CONFLICT OF INTEREST

The authors declare no conflict of interest.

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