SPORT FANS USAGE OF FITNESS APPS

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Abstract

We spend more time at home, but above all, health is a priority. And because exercise is part of a balanced lifestyle, here are mobile sports apps to help you exercise and exercise at home. When the weather outside is not friendly to be able to exercise outdoors or when it is recommended to stay indoors for a long period, as was the case in past years, to prevent the spread of the COVID-19 virus, we must not give up to physical exercises, but we have to find alternative solutions. Here's the best alternative for outdoor exercise: mobile sports apps that help you exercise at home.

In the paper "Sport fans usage of fitness Apps" we have presented a brief history of the appearance of fitness applications, a summary of the advantages and disadvantages of these applications and a short description of two studies carried out in this field of sports applications.

Keywords: Technology, Fitness Apps, Health, Study.

JEL classification: M30, M31, M37.

1. Introduction

Sedentarism and lack of movement are real dangers for the tens of thousands of peoples forced to work from home or stay with their children during this period. Individual exercise is a handy solution to staying in shape.

The digitalization of companies is a huge trend that has permeated every field of business, including the fitness industry [10]. Although many people think that digitalization only means the implementation of management and management software, this trend means much more.

In the context of gyms, digitization is not only about management software, but also about automating various actions and giving members more control over their activity [4]-[2].

Specifically, with various digital tools, members can do various operations related to their account online by themselves, anywhere and anytime, without having to depend on the hall reception.

There are several ways members can self-manage their gym activity:

➢ Through a dedicated mobile app;
➢ Through a member portal that can be accessed from the gym's website;
➢ Through various widgets inserted into the gym website.

All the actions that members do with these digital tools are automatically saved in the management software, without your employees having to do anything.

2. Literature review
2.1 Technology in sport. The history of fitness applications

The Industrial Revolution it meant the transition from manual to mechanized work. People did not work so much anymore; their tasks being taken over by various machines. The lack of physical activities led to a sedentary life. The desire and need to do sports to maintain health led to the development of the first gyms in countries such as Denmark, Sweden and Germany.

The Germans created gymnasiums where they mounted special machines where certain muscle groups could be worked through repetitive movements. This marked the beginning of gyms.

In Sweden, fitness programs have been customized according to the needs and medical problems of each person.

In Great Britain, the idea that sport helps to eliminate stress was established and its intense practice began. The first training courses for fitness trainers appeared in Denmark.

So, since the 20th century the concept of "fitness" has taken off. A great development was registered, appearing the first devices that came to the aid of people who wanted to keep in shape. The fitness industry appeared, which was frequented only by the aristocracy due to high costs. During the Second World War, the connection between fitness, muscular and cardiac endurance was realized, thus physical exercises were created to improve muscular flexibility and endurance [1]-[3]-[11]-[13].

In the present we see everywhere around gyms, parks where we can run and where we can find machines to work various muscle segments. However, the degrees of obesity, cardiovascular diseases and negative emotional states have high values.

Sport practiced on one's own initiative does not always represent a greater pleasure than obligation. "I do sports because I have to!" – it does not represent sufficient motivation for the brain, sometimes it does more harm than good. To get the optimal results you want, a fitness trainer can motivate you and install in you the desire to practice sports for real. Fitness has evolved since the Paleolithic and is in a continuous evolution. If we do sports with pleasure, it will change our life!

Sports have evolved in strong relationship with technology. The quality of sport materials and equipment increased. The fans were not forgotten: people can watch sports across multiple channels and share their experiences [6]-[9]. Sport clubs' relationships with the fans are now mediated through social media channels [8]. Social media is used by fans to cocreate sport experiences.

In the short span of 10 years since fitness apps appeared, they have evolved from simply being "games" for runners. Today, sports apps of all kinds cater to all kinds of fitness for people who want to challenge themselves, whether they're running, lifting, or doing various fitness exercises [12]. We will present a brief history of how fitness apps came to life, how they developed and how they revolutionized fitness.

To get to know the history of workout apps, we first need to take a look at the history of the apps themselves. What is an app? An application or an app is a piece of software created to fulfill a purpose. Apps are downloaded on your handheld devices, mostly on smartphones. Today, there are hundreds of thousands of apps that you can use to play games, read the news, organize your day, navigate through life and improve your fitness. No matter if you're an iOS user or an Android user, you can enjoy a ton of useful apps every day.

The App Store appeared in 2008 and just two years later, the first fitness apps appeared, ready to download. One of the first fitness apps (if not the first) was "Fit Phone", but now unfortunately it's not available to me. In the beginning, fitness apps were very simple and crude, but

as smartphones developed and started offering new possibilities, fitness apps followed and grew. In no time, a person could have their personal fitness trainer right in their pocket, whether they ran, biked, or lifted!

The most important aspect of fitness apps is the ability to show your progress, share information about other people, compare progress, and invite people to train together. These social features are what draw many people to fitness apps.

Just ten years ago, most apps contained nothing but training plans, but today, fitness apps are complicated health tools that combine fitness, wellness and lifestyle. Modern apps offer everything from training plans to stretching, meditation, nutrition and mindfulness exercises.

Fitness apps are an amazing achievement in the world of technology [17]. By mixing tech and fitness, we can get the entire world in shape.

2.2 Pros and cons: Everything you need to know about training with mobile fitness apps

Taking advantage of today's technological advances, fitness applications for smartphones provide you, at the touch of a finger, personalized workouts, a personal trainer and tools to monitor your diet and physical activity (calories burned, heart rate, etc.). Whether you choose to go to the gym or do sports in the park or in the privacy of your own home, a fitness application can be your best friend.

Advantages of fitness apps at the gym
You have a wide range of exercises to choose from
One of the main benefits of fitness apps is that they give you a wide range of workouts to choose from.

Fitness apps help you monitor your progress
Unlike do-it-yourself workouts, fitness apps help you monitor your progress and encourage you to be mindful when it comes to calories burned, pounds lost, time spent at the gym, or food you eat.

You get training based on your goals
Most fitness apps have you choose from a list of goals before giving you exercises to follow. Thus, if you want to lose weight, you will receive different workouts compared to those for increasing muscle mass. Also, from one session to another, the proposed exercises change.

You get reminders to go to the gym
If you need a push to hit the gym, workout apps often send you notifications to remind you to exercise.

You get various advices, even from professionals
There are fitness apps that not only teach you what exercises to do at the gym, but also tell you what to eat and always give you new ideas for exercise.

What's more, there are apps that connect you directly with professionals who are ready to answer your questions when you have concerns.

Disadvantages of gym fitness apps
They may charge you without notifying you beforehand
One of the most common downsides of fitness apps is that they start with a trial of a few weeks and then charge you. The problem is that many of these apps don't notify you that the trial period is over and charge you directly. Moreover, the prices can sometimes be quite steep.

They get boring and you forget about them
Even though they offer a lot of useful workouts and tips, fitness apps can get pretty boring. That's why it often happens that after you take them off you forget about them in a few weeks.

Free content is often limited
As we said above, many of the fitness apps available on the market are paid. Many of them, however, do not inform you about this aspect from the beginning. Thus, after you have taken them down and started working, you will realize that you only have free access to a very small part of the initially presented content.

It does not ensure that you are performing the exercises correctly

The fact that you follow the exercises proposed by the applications does not mean that you perform them correctly. You may think you are doing great, but in reality, the way you understand the exercise and perform it is not related to what it should actually be. This problem does not occur if you train with a personal trainer, and if you choose to do workouts with friends, they may see when you are not executing the exercises correctly [16].

2.3. The most used fitness apps in the world

Free fitness apps

Free fitness applications are gaining ground among those who don't have time to go to the gym or consult a nutritionist and don't want to make an investment before seeing the first results. Below are some of the best free fitness apps.

MY FITNESS PAL (ANDROID AND IOS)

My Fitness Pal is one of the most popular fitness apps. The best part of this self-proclaimed "calorie counter" application is the impressive database - it contains both generic foods in English and Romanian products (such as "lentil cream soup").

Also, the application includes an option to add the physical activities (it has a database with over 350 physical exercises, from aerobics to cycling and even cleaning or gardening) that you perform daily and calculate the number of calories per time base and duration. In addition to these advantages, My Fitness Pal also has a forum where you can discuss sports and nutrition with people from all over the world.

LOSE IT (ANDROID AND IOS)

If My Fitness Pal is a general application for monitoring food and physical activity, Lose it focuses more on the part of losing weight and offers you personalized advice to create a diet and exercise plan. An interesting option of this application is the Snap function. This allows you to photograph a food and tells you how many calories it has. Then, the Meal Target function tells you how many calories each meal should have in order to have a balanced diet that helps you lose weight. There is also a community where you can find out what has worked for others and make "suffering" friends.

ASICS RUNKEEPER (ANDROID AND IOS)

Asics Runkeeper is a free application, especially recommended for people who have just started running. It offers you a training program customized to your needs, the application acting as a personal trainer. Whether you are just starting out or want to run your first marathon, Asics Runkeeper makes running a routine through personalized plans that last between 12 and 33 weeks.

CHARITY MILES (ANDROID AND IOS)

Charity Miles has two goals: to help you do sports and to raise money for charitable organizations. Regardless of whether you choose to walk, run or pedal, the application equates a donated amount depending on the intensity of the exercises you practice. Moreover, Charity Miles measures the distance covered and the calories burned.

ICARDIO (ANDROID AND IOS)

iCardio helps you monitor a wide range of workouts. The application helps you measure the distance when you run or the intensity of training at the gym, based on a tensiometer mounted on the skin. It easily connects to social networks, so you will be able to show your friends your achievements. It is suitable both for those who want to lose weight and for people who want to increase their muscle mass.

CYCLEMETER (ANDROID AND IOS)

Cyclemeter is an application created for those who want to do sports outdoors, whether it's running, cycling or walking in the park. The application keeps track of training over a period of several years, offers personalized advice and graphics for progress, as well as maps with the most popular routes.

FIT RADIO (ANDROID AND IOS)

Fit Radio is an application that offers motivational music for sports. Regardless of whether you prefer zumba, spin or yoga, Fit Radio has something for every workout. The application also

offers a virtual trainer who gives you useful advice during training and even recommends music depending on the sport you practice.

FITBIT (ANDROID AND IOS)

Fitbit is famous for fitness bracelets, but the application works even without them. The Fitbit app helps you eat healthier, do more sports and set fitness goals. In addition to the number of calories burned and steps taken, the application helps to monitor weight and food consumed, allows you to add friends similar to a social network and has options to offer encouragement to loved ones who do sports or diet.

Fitness apps with money

If you want to take sports to another level, you can invest in a paid fitness application. Below are some of the best paid fitness apps and what the advantages of each are.

TOUCHFIT: GSP

Touchfit: GSP offers a fitness program created by mixed martial arts fighter Georges St-Pierre. There are special programs for each level of difficulty, and St-Pierre will give you guidance every step of the way. The application also measures your physical condition for added personalization. As the body adapts, the degree of difficulty of the physical exercises will also increase.

MUSCLE BOOSTER WORKOUT

Muscle Booster Workout offers you three options when you set your goals: lose weight, work your muscles or be more active. Then, you will provide information about the muscle groups you want to work and you will enter data such as age, lifestyle and weight, for a personalized exercise recommendation. The application combines cardio exercises with training for muscle development and recovery period to help you reach your goals. The first seven days are free.

VIDA HEALTH COACH

Vida Health Coach is an application through which you can exercise at home, under the guidance of nutrition specialists and fitness experts. Direct contact with them will help you improve your health and physical condition and have a balanced lifestyle.

OH SHE GLOWS

Oh She Glows is a "cookbook" type application that offers step-by-step explained recipes for some vegan dishes. Equipped with over 140 meal ideas, 120 of which are gluten-free, Oh She Glows combines cooking tips with professional photos and related nutritional information. Also, the application helps you choose recipes with few calories or those dishes that do not cause allergies. The even better part is that you can download the recipes to your phone so you can see them even when you are not connected to the internet.

MUSCLES 2

iMuscle 2 helps you create a training program that develop your muscle mass. The application offers an anatomical model on which you can select which muscles you want to work, and the system offers you the right workouts for each muscle group. There is a database of over 600 physical exercises (illustrated by 3D animations) that work the 152 muscles. Similar to other fitness an application, iMuscle 2 provides illustrative graphs of progress and helps you see if you have increased your muscle mass.

FITNESS POINT PRO

Fitness Point Pro includes physical exercises, explained through animations and text, that help you lose weight or define your muscles. You can also set goals for repetitions or how much time you want to dedicate to sports every day. Moreover, by entering information related to weights, repetitions and nutrition, the application offers you graphs and long-term forecasts, as well as data related to a suitable diet to develop your muscles harmoniously. It contains over 400 physical exercises; the information is saved in the cloud and there are no ads.

3. Findings and discussions

In order to identify the degree of loyalty of users towards fitness applications, we conducted a survey among 123 users of such applications. The questionnaire was created in order to fulfil the

objectives of this research. The obtained data were subjected to univariate, bivariate and multivariate analyses, supported by the statistical program SPSS 20 and Microsoft Office Excel.

In order to compile the profile of the respondent, we analysed the answers of 123 respondents, all users of various fitness applications.

Analysing the data on the respondents, we notice that a percentage of 62.61% are female, and 37.39% are male, which means that women having higher normative belief in apps than men. On the other hand, women have been more welcoming of gamification features in fitness apps than men.

The number of people who participated in the survey aged between 20-30 years were 34 people, equivalent to 27.64%, 31 respondents were aged 30-40, respectively 25.20%, 26 respondents, equivalent to 21.14%, had aged between 40 - 50 years, and 32 respondents, the equivalent of 26.02%, are over 50 years old.

The ranking of respondents according to their last absolute education highlighted the fact that 5 respondents (4.06%) have secondary education, 87 respondents (70.73%) have higher education, and 31 respondents (25.21%) have postgraduate education.

Thus, we can deduce that there is a link between gender, age and occupation, younger people under 30 who have various white colour jobs/specialists, who want to improve their physical or mental conditions, using all kinds of health monitoring applications or fitness.

Table 1. Weekly usage of Weekly usage of application

		How_times_you_use_the_application_per_week			Total
		1-2 times	3-5 times	More than 5 times	
Reasons_for_use	Improvement of physical condition	5.07%	23.91%	15.21%	44.19%
	Improvement of mental condition	11.59%	4.34%	7.99%	23.92%
	Less of free time	0.72%	5.07%	2.89%	8.68%
	Personalization of exercises	5.79%	0%	7.24%	13.03%
	Other reasons	3.64%	1.46%	5.07%	10.17%
Total		26.81%	34.78%	38.40%	100%

Source: Authors' own contribution

We made a correlation between the variables: "Reasons for use" and "How often you use the application per week" using a crosstab with relative frequencies per column. The table shows the purposes and frequency of the number of uses of the applications in the life of the respondents. The main reason behind the use is determined by the need to improve the physical condition, but also the mental condition, the respondents considering that through the movement they managed to get rid of anxiety, stress and depression

Table 2. Respondents' preferences regarding fitness applications

		Frequency	Percent	Cumulative Percent
Valid	Strava	48	39.0	39.0
	Daily yoga	17	13.8	52.8
	Tabata Timer	19	15.4	68.2
	MyFitnessPal	18	14.6	82.8
	8fit	14	11.3	94.1
	Other applications	7	5.9	100.0
	Total	123	100.0	

Source: Authors' own contribution

Next, we wanted to see which are the main applications used by our respondents, you can see their names above. Thus, there are applications that monitor steps, that provide a series of workouts, that offer you a diverse range of regimens depending on various parameters. These come with suggestions for fitness exercises, with healthy and personalized meal ideas, with a meditation program for a more restful sleep and with a general health analysis function.

Table 3. Application selection criteria

		Frequency	Percent	Cumulative Percent
Valid	The reputation and notoriety of the application	36	29.4	29.4
	Healthy and personalized meal ideas	21	17.1	46.5
	Training monitoring	12	9.7	56.2
	The application interface is intuitive and easy to use	9	7.3	63.5
	Other users' reviews	34	27.6	91.1
	Other criteria	11	8.9	100.0
	Total	123	100.0	

Source: Authors' own contribution

As can be seen in the table above, there are many reasons why users chose a certain fitness application, whether it monitors their progress or offers them various exercise or diet ideas, whether they took into account the reputation or the reviews from other users.

Tabel 4. Frequency of consumption of services offered by fitness applications

		Frequency	Percent	Cumulative Percent
Valid	1 - 3 weeks	13	10.5	10.5
	3 - 6 weeks	29	23.6	34.1
	6 - 9 weeks	39	31.8	65.9
	9 - 12weeks	24	19.5	85.4
	peste 12 weeks	18	14.6	100
	Total	123	100	

Source: Authors' own contribution

Analysing the frequency of consumption of the services offered by these applications, we noticed that 13 respondents used for 1-3 weeks, 29 respondents for 3-6 weeks, 39 respondents for 6-9 weeks, 24 respondents for 9-12 weeks, and 18 respondents were loyal for more than 12 weeks to the services provided by a famous application.
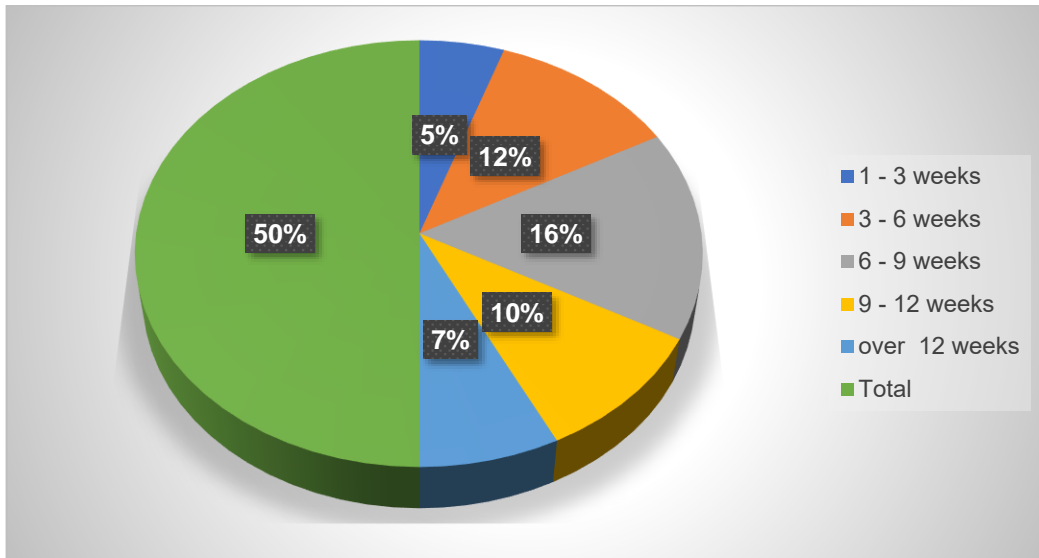
Figure 1. Frequency of consumption of services offered by fitness applications
Source: Authors' own contribution

Table 5. Satisfaction level of users of fitness applications

		Frequency	Percent	Cumulative Percent
	Not pleased at all	0	0	0
	Dissatisfied	2	1.6	1.6
	Indifferent	11	8.9	10.5
Valid	Satisfied	42	34.2	44.7
	Very pleased	68	55.3	100.0
	Total	123	100.0	

Source: Authors' own contribution

Regarding the level of satisfaction of users of fitness or health monitoring applications, most were satisfied or very satisfied with the results they had after using the workouts provided.
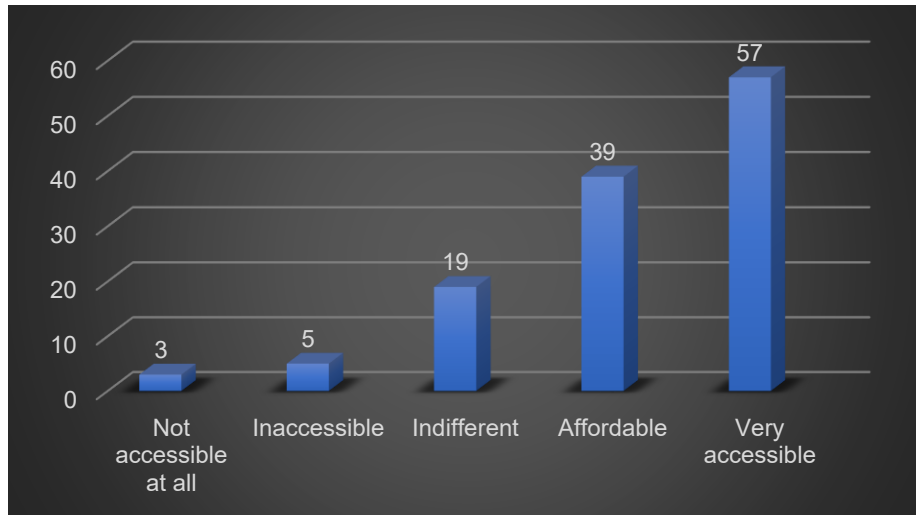
Table 6. Prices of services offered by fitness applications

		Frequency	Percent	Cumulative Percent
	Not accessible at all	3	2.4	2.4
	Inaccessible	5	4.1	6.5
	Indifferent	19	15.4	21.9
Valid	Affordable	39	31.7	53.6
	Very accessible	57	46.4	100.0
	Total	123	100.0	

Source: Authors' own contribution

Considering that not all fitness applications are free, or have a free trial period, the cost of these services is considered by users to be mostly affordable or very affordable.

Figure 2. Prices of services offered by fitness applications
Source: Authors' own contribution

Following this research, the following can be deduced:

The perceived quality of an application is complex to establish because it can be a subjective aspect and related to a personal opinion when users evaluate it.

In the sports context, gender and age are key factors for the use of fitness apps, mainly because of the importance of people's characteristics in addition to other factors such as facilitating conditions or customs.

For potential mobile fitness app users, performance level, effort exerted, hedonic motivation, and perceived privacy protection were significant variables; however, the value of social influence was insignificant. As expected, when trying to use fitness apps, potential fitness app users perceived performance expectancy as the most effective indicator of intention to use fitness apps.

Regarding the degree of loyalty towards the use of the exercises proposed by these applications, it is quite high because these applications appeared precisely because of the lack of time that no longer allows people to physically go to the gym, or other places where they can physical movement.

The need for personal health care using a fitness application is increasing due to the recent increase in the number of people with chronic diseases. Therefore, this study checked the motivation for using fitness apps, which is expected to increase in the future due to COVID-19. The COVID-19 pandemic has increased the risk of contact between people, so many people are now exercising at home instead of at a fitness centre; thus, understanding which features of a fitness app are meaningful to potential users of the fitness app is essential.

Overall, 55% of the survey respondents believe that new technologies can improve the quality of life.

4. Conclusions

Sports and technology are increasingly concepts that go hand in hand. Predicting the future is not an easy task, and even more so given the speed with which new technologies and their uses evolve.

Health will become a priority for more and more people, and a central component of this trend is fitness. With this increase in interest in following a fitness program, it becomes inevitable the demand for gyms, instructors, and experts, all competing to capture the interest of their health-conscious customers [14]. People are spending more and more time on their phones for everything from entertainment to financial transactions to work-related matters. Everything is online and everything is mobile. In 2021, 90% of internet users in Romania were online from their phone. So why wouldn't your gym be the same?!?

Technology and fitness are complementary, from gadgets that help you work out, to integrations with gym equipment or management platforms. Astute managers recognize that fitness apps are a connecting medium between a sport club or gym and its fans or members [5]-[7]. So a mobile app designed specifically for your gym members is the next logical step. The success or failure of gyms and fitness businesses is decided by their members, and an increasing number of these new members are the new generation. Because the new generations are so tech-savvy, gyms will need to embrace the same technology to be successful.

Mobile apps are brought to gym users where they are (wherever that might be) and combined with wearable technology, improves the member experience which in turn increases gym business [15]. The services offered by a gym must now extend beyond the four walls of the gym, or in other words, members expect to be able to work out at the gym...even when they are not there.

A mobile app gives them what they want – a complete package that inspires, informs and adds real value.

Acknowledgment

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