

MOBILE SPORT APPLICATIONS CAN MAKE OUR CYCLING MORE SOCIABLE

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Abstract

More and more cyclists use a variety of sports applications, which are accessible on different web portals or mobile phones. Sports applications, such as »Strava«, »Endomondo«, »Garminconnect" and many others are perfect tool for analysis their drives. Some of the sport applications also enable some kind of social network during the sport activities in the sense of virtual friendship or virtual competition. The purpose of the survey was to determine how sport applications can affect our cycling tours or trainings. We want to identify how important are these applications for the users and if they analysed and compared their cycling tours/trainings with other users. The sample consisted of 108 users of Strava cycling application (Strava club Slovenia). The results showed us that among the cyclists 61.1% used sport application in all their cycling tours or trainings. Based on the results of the survey "serious" cyclists used sport applications more because they want to improve their fitness level and on the other side "incidental" cyclists seek socializing and comparison with others. When we compared different age groups of cyclists and their attitude towards the sport applications, we discovered that cyclists in older age groups used the sport applications more often.

Introduction

The increased popularity of mobile smartphones and tablet computers in developed economies is transforming how and where sports footage, highlights and information are accessed (Hutchins, 2014). Specific sport watches or smart mobile phones were really one of the important tools of more and more cyclists or runners. The training technology made a big step forward. An expansion of GPS technology allowed many companies to develop sport watches with GPS receivers. New technologies have a huge advantages over previous generation, because they may measure the speed of training athlete using the GPS receiver very precisely. As a result, runners and cyclists do not need to use any special sensors for determining the speed, altitude and duration of activities. Currently, companies like Garmin, Polar and Suunto make serious efforts to develop additional options in order to meet the needs of athletes worldwide (Fister Jr. et al. ,2013).

Certainly, connection with digital computers and online analysis of trainings are the biggest advance of these sport watches. New technologies allow us to use the information anywhere and anytime (Novatchkov et al., 2011). For instance, Garmin Connect web service developed a wonderful online training service, where users can analyze their workouts after activity was performed. For more and more serious cyclists is instalment of such sport applications never under discussion, because they put "the cycling world" at the forefront of their life. Several past researches explains that many people who engage in sport activities in their leisure time or practise a specific sport very 'seriously' soon become completely focused on their most popular sport (Bryan, 2000). Even engaging in other sports that are quite similar to their preferred one is seen by them as an obstacle. The more 'seriously' they

engage in their chosen sport, the less frequently they participate in sport activities not explicitly associated with their preferred sport. Green and Jones (2005) assert that sport devotees consider as very important those characteristics which dictate their lifestyle or show their different attitude to the mainstream culture. In any case, they put the selected sport activity at the forefront of their life. They often experience a feeling of belonging, while also joining an environment and choosing a company where everything revolves around their preferred sport. Enthusiastic runners, cyclists or triathlon athletes often consider such sport equipment a status symbol. Top sport equipment is not only part of the 'image' but also helps boost the athletes' self-confidence and feeling of competence while engaging in a selected sport. From this point of view, having the most up-to-date and trendy sports equipment is very important for them (Bridel, 2010). Also the newest technology took place in the mind of "serious" cyclists. In these sense sports applications, such as web portals »Strava«, »Endomondo«, »Garminconnect" and many others are perfect tools for them (Fister et al. , 2015)

Some of the sport applications also enable some kind of social network during the sport activities in the sense of virtual friendship or virtual competition. Social interaction also plays an important role in sport activity. Namely, people are attracted by group activities largely because of the collective identification, the feeling of belonging, the strengthening of social connections and possibilities for group motivation (Green & Jones, 2005). The so-called "social network« sport applications allow us to socialize our cycling tours despite the fact that we are on the bike actually by yourself. At the same moment we should mention one of the most sophisticated application called "Strava", which is basically aimed for "endurance" athlete such as cyclists and runners and work on the principle of social networks. These kind of applications allow us to socialize with other athletes despite the fact that we are on our rides or runs actually alone. Such mobile sport applications allow us an overview of friends' sport activities in terms of where and how they are sport active and also what times they achieved on favourite segments (uphill's or downhill's). Such kind of applications can partially replace and quench our desire for a "racing". The use of sport mobile applications is very easy because the user can after the registration, analyse their drives and upload them on the web portal and immediately have the comparison with other users. The users can also choose whether the information will be visible only to him, or even to other users. Other users could be his cycling friends, teammates, professional cyclists, or even complete strangers. Such a mode of communication in the "round" of their friends allows monitoring the whole groups of cyclists who are members of such web portals. At the same time users have in one place also a full analysis of their trainings/drives. What a lot of users find particularly useful is that certain segments under which repeatedly driving, can be compared with previous runs.

In this case the use of sport mobile applications can change the whole cyclist aspects to their rides and also their training strategy, which may become increasingly more like a ride in a group or race. Virtual society in the case of mobile sport applications tends to be much enjoyable and special motivation to ride faster, even we are cycling completely on your own or alone.

Methods

The purpose of the survey was to determine how sport applications can affect our cycling tours or trainings. We want to identify how important are these applications for the users and if they analysed

and compared their cycling rides or trainings with other users. The quantitative part of the survey was performed using the online survey method, whereby all members of the social application web portal "Strava" were invited to take part in the survey. The online survey questionnaire was completed by 108 members or users of Strava cycling application (Strava club Slovenia). Data were processed with the IBM SPSS Statistics software package, ver. 20. The data were first analysed using descriptive statistics methods showing frequency distributions and the correlation between socio-demographic activities and sport involvements. To find different attitude towards the sport applications we divided the respondents into two groups according to their level of sport involvement ("serious" cyclists & "incidental" cyclists). The classification and merging of participants with similar characteristics in terms of their frequency of engaging in sport were performed using the cluster analysis method. Ward's clustering method was applied. The criteria for group classification included: (1) frequency of engaging in sport (number of hours per week); (2) past sport (cycling) experiences and (3) cycling level. Additionally we also compared the attitude towards the sport applications between different age groups (<25 years of age; 25-35 years of age; > 35 years of age).

Results and discussion

The data from showed that more and more people used mobile sport applications to analyse their sport activities and also for comparison with other members. The results showed us that among the cyclists 61,1% used sport application in all their cycling tours or trainings. Among them, 86,4% of analyse all their rides. 56% of all cyclist also used such kind of applications for virtual comparison with other members of several sport web portals.

Results showed that for 28.7% cyclists such sport applications were represented as one of the most important motivational factors for further training. It is also interesting that more than half (60.4%) of cyclists in the survey sport applications have become an indispensable part of their training or rides. Some of the cyclists also used more than one application for analysing their rides. Near the application Strava the 53,3% of the cyclists in the survey used Garminconnect; 17,1% of them sport application Endomondo; 14,4% of them Polar personal trainer etc. This can also be the reason why this kind of sport applications have become quite noticeably and more popular and widespread over the last few years.

The age structure of Strava club Slovenia member showed that most of cyclists were 30 to 40 years old. In our study the average age of the cyclists were $34,18 \pm 9,91$ years. When we compared different age groups of cyclists and their attitude towards the sport applications. We divided cyclists in the survey in different age groups (<25 years of age; 25-35 years of age; >35 years of age). Results showed that there were no significant differences between different age groups in the frequency of using of sport mobile applications ($p = 0.786$). Results also showed that cyclist who are older than 35 years used sport applications more often. This can be explained by the fact that 88.9% of cyclists above 35 years used applications on all their trainings/rides in comparison with the share of cyclist under 25 years (84.9%). It is also evident from the table 1 that older age group of cyclists mostly agree with the statements that sport applications have become an indispensable part of all their rides.

Table 1: Differences in statements about sport applications regarding to the age groups

<u>AGE GROUP</u>	<u>< 25 years old</u> <u>N=26</u>	<u>25-35 years</u> <u>old</u> <u>N=40</u>	<u>>35 years old</u> <u>N=42</u>
Always analyse all my rides	4,04±1,24	4,13±1,21	3,95±1,29
Using the sport applications for comparison with other members	3,08±0,99	3,55±0,85	3,57±1,52
Sport application are motivation for riding the bicycle	3,00±1,44	3,28±1,55	3,64±1,35
Sport applications have become an indispensable part of all rides	3,77±1,24	4,18±1,21	4,80±1,28

Legend: Average value according to the Likart scale. 1 – Disagree; 5- Agree

We discovered that for cyclists in older age groups (> 35 years old) were sport applications some kind of motivation for further rides and training. They also used sport application more often for comparison with other members as we saw at younger age groups of cyclists in the survey members. The socialising aspect of cycling must also be considered. Some authors who delved into the habits of cyclists established that predominant among cyclists are not those who perform the training session alone but those who prefer cycling in pairs or large groups (Bull, 2006; DuRoy, 2000; Rauter & Doupona Topič, 2010). The above findings of the study showed slightly opposite statements that half of the cyclists (50%) in the survey ride the bicycle alone. Only 4,6% of them mostly go to the ride in large group of cyclists. Maybe can be explanation, because they find replacement in using of sport applications.

Table 2: Differences in statements about sport applications regarding to level of sport involvement

<u>LEVEL OF SPORT INVOLVEMENT</u>	<u>Incidental</u> <u>cyclists</u> <u>N=72</u>	<u>Serious cyclists</u> <u>N=36</u>
Always analyse all my rides	3,99±1,23	4,14±1,09
Using the sport applications for comparison with other members	3,56±1,49	3,22±1,42
Sport application are motivation for riding the bicycle	3,60±1,39	2,86±1,35
Sport applications have become an indispensable part of all rides	4,32±1,23	3,86±1,29

Legend: Average value according to the Likart scale. 1 – Disagree; 5- Agree

Results of the frequency of sport engagement in cycling showed that cyclists in the survey trained in average $9,81 \pm 5,06$ hours per week. The results of our study are comparable Bull (2006) found for a group of recreational cyclists they were physically active 11, 4 hours a week on average. Nevertheless, we found some differences between them. Consequently, we classified and merged participants with similar characteristics using the hierarchical cluster analysis method. Depending on the frequency of sport/cycling engagement and past experiences with cycling those groups of cyclists in the survey were named as (1) incidental cyclists and (2) serious cyclists. We established that the serious cyclists are

more physically active (15,08±3,33 hours per week) than the incidental cyclists (6,43±2,27 hours per week).

On the other side it was also interesting that “incidental” cyclist more frequently used the applications for motivation or comparison with other users (table2). While “serious” cyclists focused significantly more attention to the analysis of their own tours. Based on the results of the survey “serious” cyclists used sport applications more because they want to improve their fitness level and on the other side “incidental” cyclists seek socializing and comparison with others.

Conclusions

The increased popularity of mobile smart phones and watches allows athletes to train smarter. More and more cyclists today use a different sports applications that run on mobile devices, such as Strava, Endomondo, Garmin Connect and many others. Primary tasks of such applications is tracking and analysing their workouts and additional also comparison with other members. The purpose of the survey was to determine how several mobile sport applications can affect the training of the cyclist. We divided cyclist according to the level of sport involvement and age group. Survey results showed us that cyclists who train more used sport mobile applications to train smarter and on the other side less sport active cyclists used these kind of application for comparison with others. Surprise for us was also that cyclists in older age groups used the sport applications more often. For those cyclists sport mobile applications were some kind of social network during the sport activities in the sense of virtual friendship or virtual competition.

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