Title: Exploring the impact of wearable activity devices and social media technology in fitness participation

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Abstract

This study examined use of wearable activity trackers and social media, and their influence on motivation for physical activity and participation in endurance events. I did a literature review of social media's influence on event participation and the influence of activity tracking usage on motivation to participate in fitness activity. The literature is broken down by a study of each technology, and then the interaction between them. I also conducted my own research by gathering data, conducting a survey and interviews. Through these methods I show that on their own, each of these technologies can influence motivation and participation. Furthermore, when the ease of uploading data from a tracker is combined with social media, the technology is having a direct effect on physical activity and recreational endurance sports participation.

Introduction:

Wearable fitness activity trackers are devices designed to support physical activities. They are used for goal setting, data collection, and behavioral feedback. The market has seen proliferation and innovation in various types of devices, taking them from a simple pedometer to advanced location tracking devices with web integrations. Common examples for athletes, both recreational and professional, include Nike Fuel, Garmin, Suunto, TomTom, Google and Apple watches, and for the more casual participant, the FitBit. These devices not only track activity, but they also integrate with online social media platforms, allowing users to broadcast their activity to friends, family, and even strangers who share common interests. It has been much researched that social support

from friends and family can influence exercise [1]. Exercise may be influenced by the people around us, and these people often add encouragement and opportunities to participate in exercise [2]. Further, positive feedback from friends and family is related to greater physical activity [3]. There have been increasing studies in motivation with online social networks recently. The purpose of this report is to look at the combination of activity trackers and social media networks and explore their contribution to the motivation of non-professional athletes to participate in fitness programs and events. The question asked is whether the innovation and emergence of these technologies are changing behavior.

Description of terms

Wearable Activity Devices/Trackers: a device for monitoring and tracking fitness-related metrics such as distance walked or run, calorie consumption, and in some cases heartbeat and quality of sleep. The term is now primarily used for smartwatches that are synced, in many cases wirelessly, to a computer or smartphone for long-term data tracking.

Marathon: any race that is 26.2 miles long

Road race: races run on the road, as opposed to trail. Road races are accessible to most people, no matter where they live.

Ultramarathon: any race that exceeds 26.2 miles, typically run off-road. Popular distances are 50K, 50 miles, 100K and 100 miles

Virtual race or virtual challenge: Participants run the race on their own, then self report or automatically upload details into a website or social media network. This type of event is accessible to all.

Strava: On-line community popular with runners. Data can be uploaded instantly from most wearable tracking devices and shared in groups or publicly. Strava also offers virtual challenges for users.

Description of the technology:

The devices fall into two categories. There is the GPS watch (ex. Garmin) which features multi-sport tracking capabilities, built in heart rate sensor, and a variety of special profiles for jogging, swimming, cycling, skiing, paddle sports, a variety of weight loss activities, and hiking. It comes with built-in GPS to track the location and to calculate the distance. There are electronic devices (ex. FitBit) that are basically upgraded versions of pedometers. In addition to counting steps, they use accelerometers and altimeters to calculate mileage, graph overall physical activity, calculate calorie expenditure, and in some cases also monitor and graph heart rate and quality of sleep. The devices sync directly with computers or apps on phones. Once synced, the activity can be shared with online social networks and fitness apps, usually automatically. Once the data has been synced to the phone or computer, the data can be reviewed. Depending on the service, automatic reports can be made for the user to analyze their data. Many have the ability to download into excel. Within the Strava community, runners can find other Strava users who were running the same race or the same route, and then they can connect with each other.

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Review of Literature

The purpose of this section is to review the most relevant research that has studied activity trackers, on-line social media, and fitness. Books on training for a marathon always encourage the athlete to tell everyone they know about their intentions. Now, with social media, there is a perfect venue to do that (Webley, Time Magazine). Combined with activity trackers and the ease of posting directly on social media, the social network becomes an athlete's community.

Activity Trackers

"A lot of my friends post pictures and their GPS course upload online and that is motivating and is great for sharing different places to run and a gives options for me to explore for a change of scenery" Survey Responder, Appendix [A]

Understanding Quantified-Selfers' Interplay between Intrinsic and Extrinsic Motivation in the Use of Activity-Tracking Devices, Shin, Cheon, Jarrahi, 2015 [4]

The authors were interested in discovering how a person's current motivation is affected by a wearable device. They conducted interviews with 15 participants, and sought to understand the long-term use of the technology. They picked participants who adopted the Fitbit device. They used data from participants to categorize them into groups, divided by activity level and motivation for getting the device (extrinsic vs. intrinsic). They found that there was a very special type of participant, a "Quantified Selfer" (Q-Selfer), and he had completely different motivations for using the device. This participant is constantly seeking more accurate ways to measure movement, blood pressure and eating, through devices. He wants to compare different devices. Also, he

was fascinated by the data results. And finally, he wanted to share personal data on social media platforms. Once many of the participants had learned their routine physical activities, they stopped using the device. The authors explored Q-Selfers by looking at the most popular posts on the Quantified Self online forum. They found confirming results. The people on this forum had 3 characteristics in common: Data-orientedness, the use of different tracking devices and applications to find more efficient methods to track and manage data, and being open to sharing personal data publicly.

Social Media Networks

"When all these people around you are doing it, you look at them and think, "Well if they can run a marathon… It spreads like wildfire" - Jennifer Weber, first time marathoner [5].

"I like sharing my experiences and getting positive feedback. Also, when I have a bad run or race it's nice to get support from my community." -Survey participant, Appendix[A].

"My Executive MBA classmates are all mid to high level managers and supposedly they should be very busy. I joined a jogging club, and we set a common goal to run 5 KM per day. I was surprised to find that every evening, I got LINE messages from the club members reporting their progress. If I missed out on a day, they would urge me, "hey you owe me one. You've got to make it up for me tomorrow!" It's like in the army, it's much easier to run distance together with such peer pressure and team spirit. We also

shared tips for warm-up and stretches before and after jogging to prevent from injury." - Research participant[6]

I like my Apple Watch. One day I reached 200% of my goal from jogging. I shared the result on Facebook and got way more "likes" than usual. It felt good - Research participant[6]

Factors leading to increased marathon participation and use of social media.

Murphey and Lee, 2012 [7]

This study had two purposes. The authors wanted to determine media outlets most used to find out about attributes of a race. The second purpose was to explore the factors that led to participation in an event. They recruited 13 participants from the running community and conducted interviews. They found that most runners learned about races through word of mouth. The participants would not go to Facebook to look for races. But if their friend posted something about a race they completed or were training for, they would leave a comment or like the post. It was a good venue for runners to understand what others had experienced at an event.

Examining the impact of an online social media challenge on participant physical activity and body weight in the United States, Hales, B. Grant, D. Barr-Anderson and G. Turner-McGrievy, 2016 [8]

The authors examined an online media physical activity challenge to encourage participants to complete at least 13 races (running, cycling or triathlons) in 2013. A

private Facebook group was set up for support and information to participants. An important aspect of this study is that participants had the option to do a traditional race, or a virtual race. Participants logged their time and distance on line. A total of 757 participants began the challenge, but 34% did not log any races. Over ⅓ of the remaining 497 participants completed at least 13 races. They followed up with a survey, which 69 participants completed. Most participants reported using Facebook, followed by blogs and Twitter most frequently to discuss running. Survey participants reported completing a significantly greater number of races, as compared to the previous year. Also, the mean number of miles ran/walked during training and races was significantly higher. The mean number of virtual races completed was significantly greater for participants with children.

I use Strava which I believe was the best tool for motivating me back into cycling and endurance running after an injury. I also have very, very few friends who do ultra running, trail running, or collegiate cycling (I race for my university) so I rely on Facebook groups like the Running Ultra Ladies Only group to encourage me as a solo athlete and help me with advice (of which I think is better than articles I can dig through online) - Survey participant, Appendix [A].

Social media networks and activity devices interaction

My Suunto uploads to Strava automatically. If it didn't, I don't think I'd really use Strava - Survey participant, Appendix[A]

Exercise contagion in a global social network, Sinan Aral and Christos Nicolaides, 2017 [9]

By far the largest and most compelling research came out very recently in April 2017, from two MIT researchers at the Sloan School of Management, published in the journal Nature Communications.

The authors analyzed running habits of over 1.1 million people over the course of 5 years, and determined that running is truly contagious. They analyzed how behaviors spread through a global social online network (unnamed network due to contractual limitations). Sinan Aral and Christos Nicolaides of the Massachusetts Institute of Technology used fitness tracker data to study the running and activity habits of the participants. People who joined the network would upload data from an activity tracker, which precisely tracked daily exercise regimens. They also become virtual friends with others in the network who seem like-minded. Friends then automatically share workout data. The runners had formed about 3.4 million social network ties. The authors analyzed the 2.1 million ties for which they could determine geographic location and weather information for both users. Over five years, these social media users ran a collective 350 million kilometers — and their runs were all automatically posted online for their friends to see. The researchers also considered weather. Bad weather can halt running, so if someone goes out in poor weather on a day when friends somewhere else have run, the bad weather runner presumably has been influenced by what his or her friends did that day. The researchers also gathered five years' worth of data from global weather stations and cross-correlated this massive database with information about the 1.1 million runners' daily workouts.

According to the researchers, peer effects are significant with running. From the author: "Suppose, for example, that a runner (A) usually runs 6 km at a pace of 7 min km 9.143 km min) and their friend (B) usually runs 6 km at a pace of 8 min km (.125km min). An extra kilometer run by B (an increase from 6 to 7 km) causes A to increase their running distance by .3 km (from 6 to 6.3 km). Also, a .01 km min increase in runner B's pace (from .125 to .135 km min) causes runner A to increase their pace by .003 km min (from .143 to .146 km min). With that in perspective, their findings are significant. On the same day on average, an additional kilometer run by friends influences an individual to run an additional 0.3 kilometers. An additional kilometer per minute run by friends pushes a person to run an additional 0.3 kilometers per minute faster than usual. If those friends run an extra 10 minutes, that person is likely to run about three minutes longer than they would have. If those friends burn an extra 10 calories, that person will end up burning 3.5 more calories. The effect is strongest on the same day and appears to diminish with time, claim the authors. So the scientists found that a runner's on line peers did influence him or her to run more. But they also discovered that not all users influenced their online friends equally. People were more likely to be affected by their less-active peers than by more active ones. Men were influenced by the activity of both men and women, but women were influenced only by other women. Inconsistent runners influenced consistent runners far more than the other way around. So people who are thought to be the closest fitness peers, particularly those who are slightly lower in fitness, are most likely to get others to push themselves.

Another finding was that the embeddedness of a relationship (number of mutual friends) also had a promoting effect of the contagion (running). Mutual friends provided an added incentive to keep up with the friends, providing social rewards for positive behaviors.

Sinan Anal determined that the relationship was not just correlation, but causation.

Reciprocal reinforcement between wearable activity trackers and social network services in influencing physical activity behaviors. Chang, Lu, Yang, Luam, 2016 [6]

The purpose of this study was to determine how wearable activity trackers and social network services or sites, could work together to foster sustainable physical activity behavior changes and habits in middle aged adults (40-60 years old) in Taiwan. This was one of the few studies that looked at how these two technologies interacted and affected fitness. The authors concluded that combining these two technologies was cost effective and scalable. The combination elevated tracking devices to a "personalized PA assistant". They also concluded that the useage of a social network with the device will increase the engagement and adherence of the device.

Since prior research had indicated that activity trackers had been adopted by people seeking fitness as well as social connections, the researchers had the question about "whether WATs designed with integrated social site function could be more effective in changing physical activity behaviors and habits". The authors conducted in-depth

interviews and did focus groups with 15 participants. They used open ended questions. Then data was collected from the transcripts.

Results:

1. Wearable activity trackers provided more awareness than motivation in physical activity with goal setting and progress monitoring. The devices themselves were not what motivated people, it was the assistance to help them achieve their goals. However, simply relying on the device itself was not enough. Many respondents did not adhere to the new exercise regimen, or stopped using the device altogether. They said they were bored, or lacked companionship. *"Once I formed the habit of mountain-climbing, I stopped using my Xiao-Mi as it served no purpose any more. Since I climbed by myself, what I really want from my wearable activity tracker is to have a quick "handshake" function to exchange contact with those familiar faces I bumped into a lot on trails. This would allow us to get to know each other and can help out when necessary, such as in the case of emergency"* -research participant
2. Social support, delivered/obtained via social network services or sites, increased users' adherence and engagement with wearable activity trackers and vice versa. One participant who said she was too busy to meet a friend for a run, met her virtually instead. "*Since it took too much time to fight the traffic across the town, we decided to jog on the two sides of the same river (we live at the opposite sides) at the same time and to keep each other posted along the way through exchanging pictures of our WAT results and beautiful scenery via the LINE messenger app to keep us motivated. We had so much fun "together!"* -research participant

3. A broad spectrum of configurations would be needed to deliver wearable activity trackers with appropriately integrated social support functions. Older groups of people are not interested in wearing the devices. They don't want to be "watched", they lack the technology support, or they want the device to do other things, such as check glucose levels.
4. Organizational Social Support from team challenges could be transformational in changing people's physical activity behaviors and habits, but most of the current wearable activity tracker designs lack team support features. Current devices lack team support features, such as emergency alert buttons, GPS location of team members, or any real time communication features.
5. Social support from professional services complement wearable activity trackers in sustaining physical activity behaviors and habits to maintain one's health. Users find it beneficial to push data to physicians, online running coaches, weight loss coaches, etc.
6. Wearable activity tracker design, style, and appearance mattered even more than those of smartphones, as they are body-worn devices. One participant was frustrated that he wore a $300 Garmin to work and it was mistaken for a toy watch.
7. The user interfaces of wearable activity trackers left a great deal to be desired. Many users were very annoyed with getting prompts and reminders. They are designed to encourage the behavior. Some people found it useful, but others were bothered.

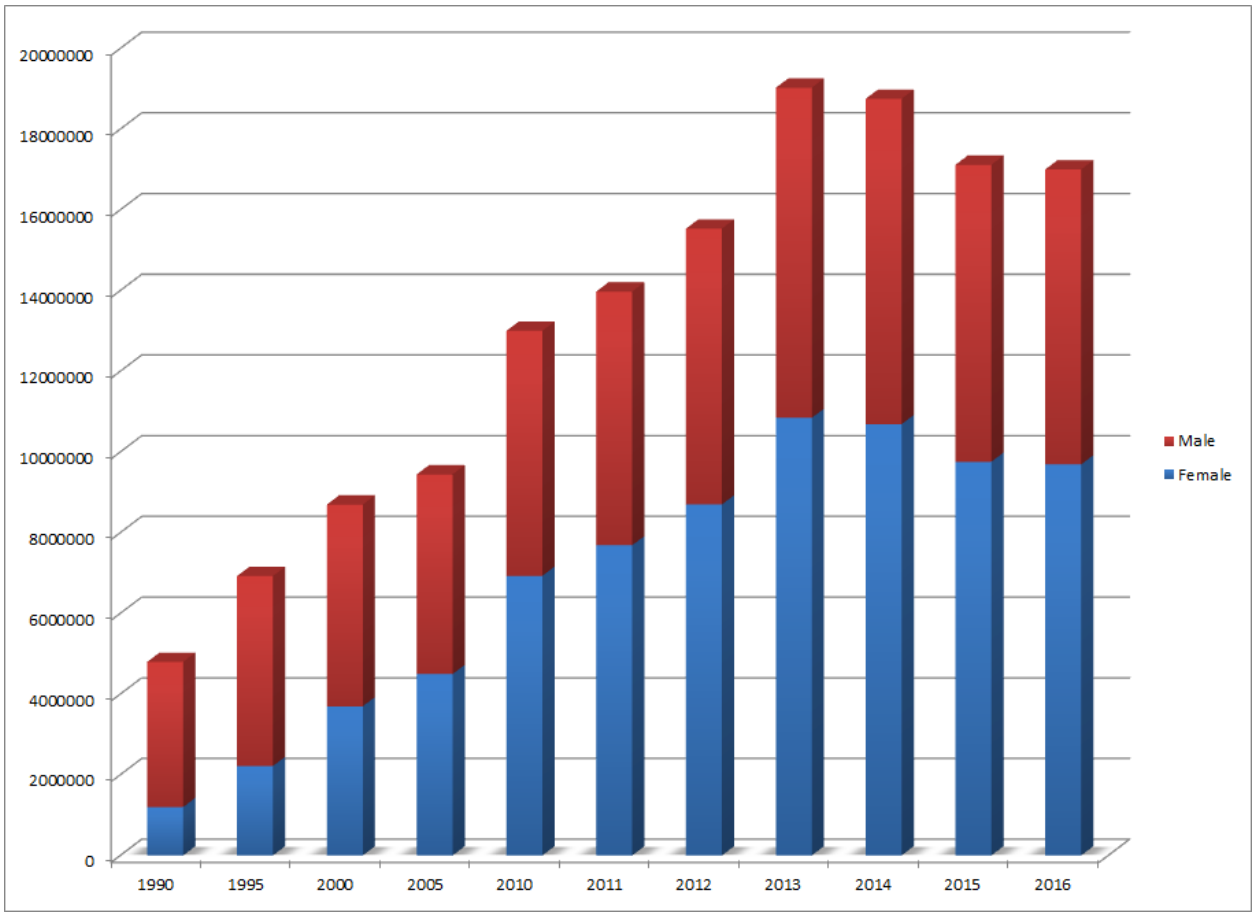
8. Privacy concerns must be addressed before more mainstream consumers would consider adopting wearable activity trackers. As this article was written in Taiwan, it is unclear whether they have the closed communities that we have in America, with the privacy settings that are offered.

Additional Research and Research Methods:

I gathered data that pertained to running participation and social media network engagement. I first gathered data on runners. I used race events, so that the problems with self reporting would not be an issue. I then gathered data on Facebook, the most common social site used. I also conducted a survey of 100 respondents in a Facebook running group. I conducted two expert interviews.

Data Collection: Running events are increasing in numbers, as well as the number of participants in these events. Road races alone experienced 300% growth in finishers from 1990 to 2013 [11]. In 2016 females accounted for 9.7 million finishers nationwide, and represent 57% of the field [11]. While there were some small decreases in 2013 and 2014, these are attributed to lower numbers in the OCR (obstacle course races) sector. "Between organizations going out of business and others seeing a 30+% decrease decline in finisher totals of up to 30 percent, over one million fewer runners participated in OCR races in 2015." [11]. The obstacle course races are somewhat of a novelty event. They include mud, paint, bubbles, and other non-running related incentives. Taking that into account, growth has been long term and healthy.

Road running event finishers:



Source: www.runningintheusa.org

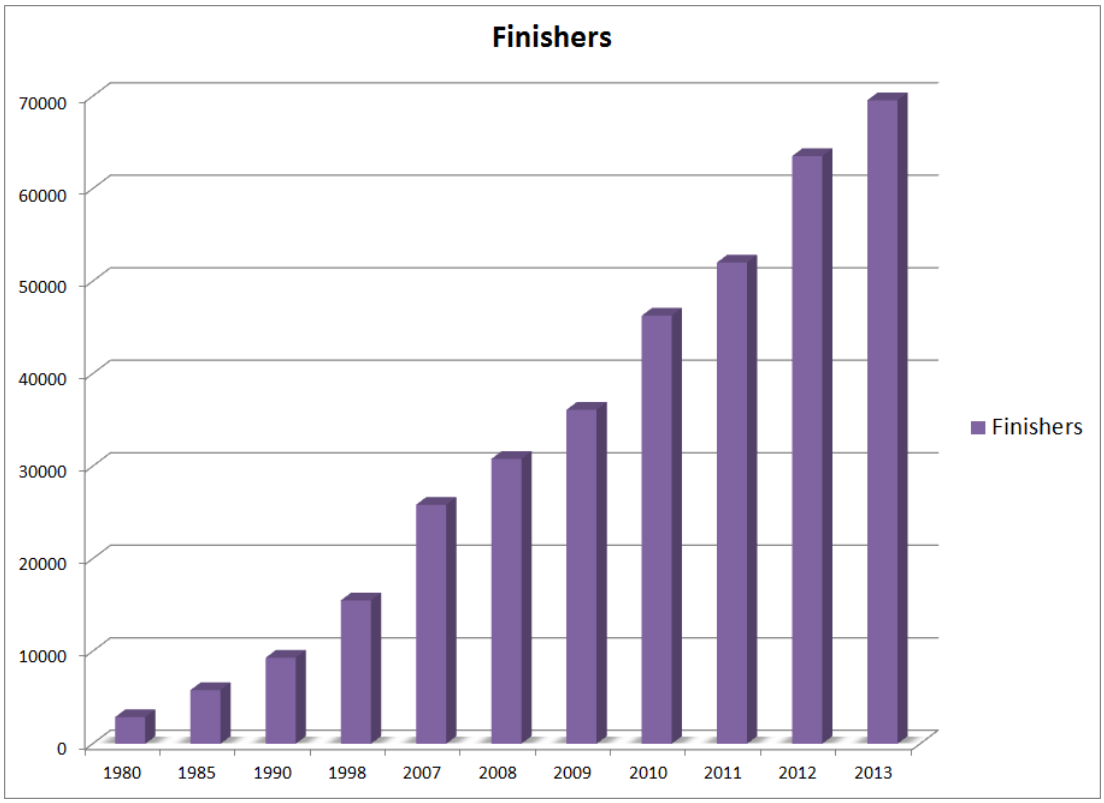
Marathon Finishers:

Year	Estimated U.S. Marathon Finisher Total
1976	25,000
1980	143,000
1990	224,000
1995	293,000
2000	353,000
2004	386,000
2005	395,000
2006	410,000
2007	412,000
2008	425,000
2009	467,000
2010	507,000
2011	518,000
2012	487,000 (NYC Marathon cancelled)
2013	541,000
2014	550,600 (Record High)
2015	509,000

Source: www.runningusa.com

Ultra marathon running events (primarily off road):

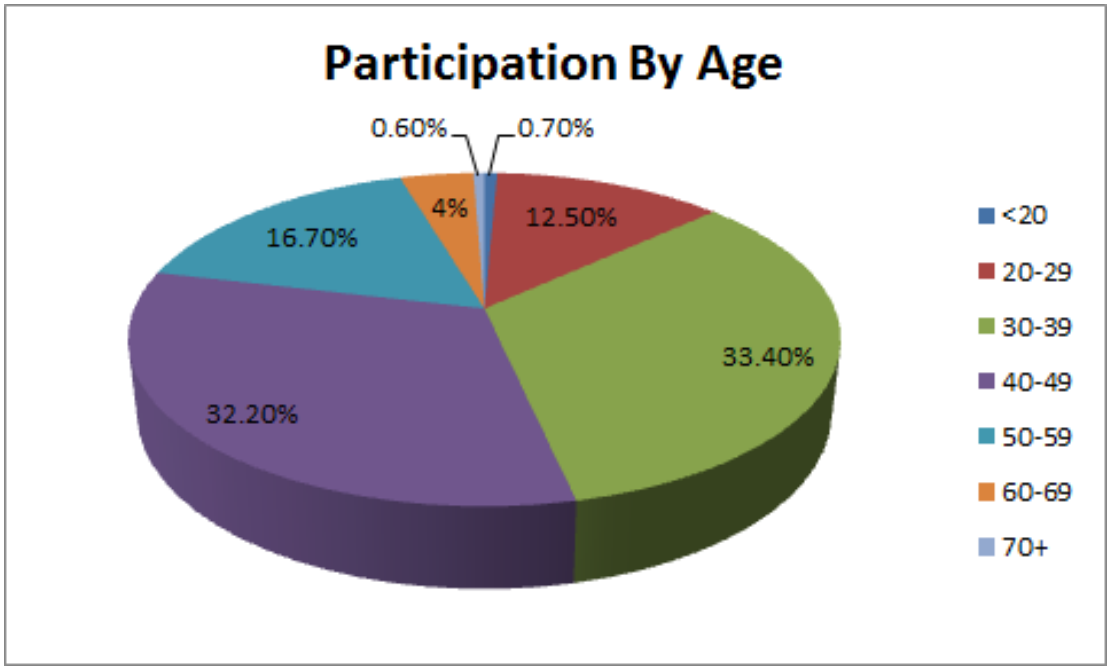
Ultra marathons, while making up a smaller percentage of running, are growing as well. In 2014 there were 1200 ultra marathons held, which is more than 300% higher than in 2004 [10]. Ultrarunning magazine made public their statistics through 2013.

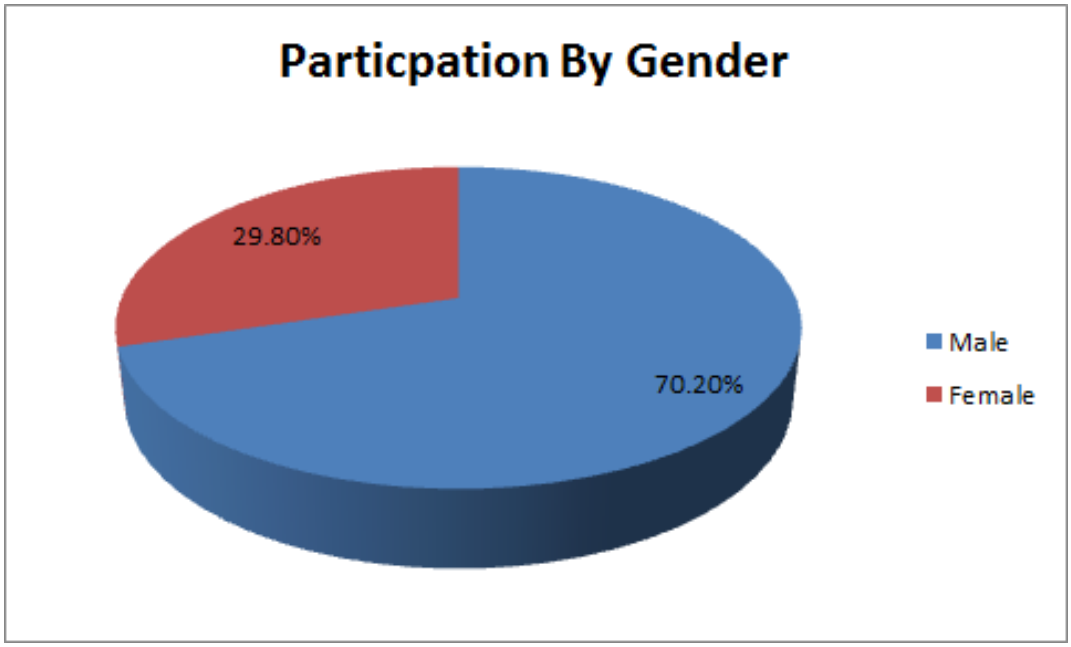


Source: www.ultrarunning.com

Participation in ultra marathons by age and

gender:





Source: www.ultrarunning.com

Facebook Data:

- Age 25 to 34, at 29.7% of users, is the most common age demographic.
- Facebook users are 76% female (out of 100% of all females) and 66% male (out of 100% of all males). (facebook.com)

Strava Data:

Strava closely guards their data and there is no reputable source for statistics.

Additionally, I conducted a survey, Appendix [A]. I used a closed group of Facebook runners. I do not know anyone personally in the group. The group's purpose is to give support and advice for long distance runners. Typical posts would be requests for advice on shoe preference, tips on nutrition before or during a race, and gear advice. Occasionally a photo is posted, typically by a first time participant. I asked questions about their tracking and social media habits. I received 100 responses in 4 hours, confirming the previous research that stated the participants who were most engaged were also enthusiastic about sharing their experiences online (via electronic survey). All the respondents were women, and the largest age group was 35-44 (45%). The majority of runners were high mileage runners, with 50% running between 20 and 40 miles per week.

Results: 92.93% of the respondents use a fitness tracker. Sixty-eight percent use an online community, such as Strava or Facebook to post results. A significant number that I saw was that 79% said that they were motivated to do a race themselves after seeing a friend post on social network about an event they were doing or had done. The question

stipulated that it did not have to be the same event. Participants were invited to leave comments and many have been put in the relevant sections of this paper.

Expert Interviews:

Janet Rosenthal

I sourced myself for an expert interview, Appendix [B]. I am an expert in that I am a long time participant in running, I am a user of the technology, and I am also a coach. I answered the question "Discuss your relationship with activity trackers, social media communities, and running motivation. How do you use technology in running, how has the innovation of these technologies affected your behavior, and do they provide motivation?". I discuss my desire for data, and ranking myself against other runners. The use of a Garmin grew my involvement with social media and running communities. I originally started using a Garmin to socialize with other runners online. My race participation is often motivated by other runners posts and photos.

Jeffrey Kline

Coach Kline runs a successful online coaching business for runners and triathletes of all levels. This month he is launching his own app and platform called FitBookDaily. He provided an interview answering the same question, but in relation to his athletes and his business. Appendix[C]. In 2009 Coach Kline had about 30 local athletes he trained via in person and email touches. That year he took his business online, and he now has 300 clients all over the world. He started with just Twitter and Facebook. He says that the emergence of these technologies brought about an entire new way of doing business. He

claims to have coached thousands of athletes in the past 8 years, which could not have been achieved locally. Coach Kline is a heart rate based coach, in that he trains his athletes by giving them heart rate goals for workouts, rather than mileage and pace. His business is dependent on activity trackers and data uploads. His athletes upload their data and he sees it immediately. He says that through the "gadgetry" and online networks, he can touch his athletes every day and make adjustments. He developed his own platform because he saw the need for a warmer environment. He says his athletes feel like they are part of a family, and he wanted to capture that need with a new platform.

Results and Evidence of Literature Review and Research

Results of this research backed up the literature findings. Running has become dramatically more popular in the last decade. Evidence is in race signups. My research shows that running events and Facebook are popular with the same demographic. Ages 25-34, with a higher percentage of women participating in both running events and online media. The highest percentage of Facebook users are in the 25-34 year old bracket (29.7%). My survey respondents, found on a Facebook group, were most represented in the 35-44 bracket (45%). Forty-nine percent of race finishers are in the 25-44 age bracket. Furthermore, the people who most reliably follow a fitness regimen with an activity tracker have unique qualities about themselves - they enjoy data and they enjoy sharing information online. My survey confirmed this with the enthusiastic participation in the online survey and comments. The comprehensive Aral/Nicolaides study proved that running is contagious, influenced by social media peers. The previous studies suggested the same contagion, but with less robust research methods. The 2012 study

looking at Facebook's influence on marathon signups was an earlier, less robust study that showed there was a degree of motivation [7] at work, as well as the 2016 study of online challenges, where the survey participants overwhelmingly ran more miles as part of an online community. My survey suggests that the same influence is at work with running events, with 79% respondents saying they are influenced by online friends' race signups. The expert interviews confirmed aspects of the research as well. I fit into the demographic that widely uses social media and participates in running. Also, I would identify myself as a Q-selfer. The data is very appealing to me, and I am open to sharing certain personal information online. Once in an online community, I join challenges and groups both virtually and in person. I am influenced by my peers, as evidenced in the data mining that I do of other runners. I mentioned that I match up times and splits based on what I have collected on myself, as well as other runners. Also confirming the MIT study, I adjusted my training plan according to the information I received about other people training for the same race. Additionally, Coach Kline's interview suggests that the people most embedded in the growth of this technology are seeing the benefits of the social contagion first hand, and reacting with their own user innovation, from the bottom up.

Implications

The implications of this research are significant. The use of the automatic uploads from the device have changed research and made it more reliable. The research no longer is dependent on self reporting. The research implications of social media are significant as well. Social media is a participant's natural environment of interaction, compared to a

focus group or laboratory. The findings of these studies could be transferred to other lifestyle behaviors, such as obesity programs or smoking cessation programs, or a couch to 5K running program. There is a strong case for any health program to have a strong social media aspect. The virtual support system has proved to be as valuable as the friends and family support. This could be incorporated into programs as well, for people who don't have time or access to a group. In terms of the devices themselves, the Q-selfers would be a group that could be targeted for a program that utilized tracking. Also, the current devices and social media usage is overrepresented by a subset of the population. This is important information to have when designing a program for someone outside that subset. It could also lead to the innovation of new types of trackers for those outlying groups, and a different online experience possibly evolving for people resistant to social media.

Conclusion

Technology innovation is having an effect on recreational endurance participation. It appears to be limited to a particular subset of the population. There are some limitations with the current research. The most compelling study out of MIT used only runners, as did my survey. It is possible that many of these people had already made behavior changes. Much of the benefit of this type of research is to help people change poor lifestyle habits. Further research of this kind for people looking to make changes would be beneficial. Furthermore, because a certain amount of openness to technology is needed for both device usage and social media usage, the research can not include older adults very well. This population would be well served by technology innovation that

was directed at their needs. Overall, with tracking devices being ubiquitous, and the proliferation of the internet and social media, the effect of these technologies is beneficial to many people, and with further innovation can include more of the population.

Authors Note: The Management of Tech Innovation class with Dr. Weber gave me a new awareness to the innovation of these products. While the technologies may be changing behavior, much of the innovation is coming from users, which was surprising to me. Facebook was not designed as a running application, but runners creatively used the network for their needs, which pushed the development of new communities. Originally GPS was used for orienteering, but again athletes took the technology and pushed it in a new direction.

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Appendix

[A]Survey https://www.surveymonkey.com/results/SM-2LGTH6KP/

[B]Expert Interview: Janet Rosenthal, veteran runner, coach, Garmin user, social media participant. 48 year old female.

As the interviewer and interviewee, I will introduce myself as an expert, and then answer the following question: Discuss your relationship with activity trackers, social media communities, and running motivation. How do you use technology in running, how has the innovation of these technologies affected your behavior, and do they provide motivation?

I am Janet Rosenthal. I have been a runner for 20 years. Before running, I did not participate in sports and led an unhealthy life. I typically run at least 50 miles per week. I run alone as well as with running partners. I run every distance and have finished over 100 marathons. Some highlights include finishing a 100 mile trail race in 2015 in under 24 hours, and being the Oregon Masters Mile Champion in 2011. I also have coached many types of people. For years I coached a "couch to 5K" program. I put together a group of beginners looking to make a lifestyle change. I gave them a training program with a 5 km race to finish as a goal. The groups would meet bi-weekly for running and advice. I also coached cross country and I was the director of a track camp for all levels of fitness for kids.

When I started running I signed up for a "cause" marathon. I wanted to participate in a marathon, but I was a new runner, and I felt like I needed the support and motivation of running for a charity. Through the charity, I did not meet any running partners, as the running group fizzled out quickly. This was 20 years ago, so all in person communication and training. I trained by myself with a stopwatch. I did not enjoy it, but during the race I was encouraged by the crowds and other runners and I got excited to do it again. I was constantly looking for running partners, but mostly gave up and ran alone. I was lucky to have the support system of my husband, or I would not have continued. Over time, I realized I had some talent for running. I also dropped my bad lifestyle habits, cured a chronic health problem, and reduced stress. I attribute all three to running.

In 2009 I joined Facebook because I met a runner in the forest who told me to find her on the site to schedule runs. I thought this was an amazing idea. You don't have to know someone's email or phone number. So I joined Facebook and I picked people I ran with for my connections. This technology led to big changes. I would get up in the morning and write on the site where and when we were planning on running, and we could put a group together in that way. I started to meet people at races and we would find each other on Facebook to coordinate runs. By 2011, people were requesting connection with me who had nothing to do with running. I no longer felt comfortable broadcasting my whereabouts. I stopped posting running information on Facebook. In 2010 I moved across the country. I found many running groups by searching through Facebook. Groups posted their training runs and race plans. Perhaps due to local business influence, Portland seemed ahead of other places in their use of all running technology. In 2011 I started running with a new group of friends in my new home of Portland. They all wore Garmin watches with GPS tracking and uploaded their runs. They would then

post on Facebook or text screenshots to each other. I love data, and it felt very social. I purchased a watch and started doing the same. We would post on Facebook, and other runners would comment that they wanted to learn our route, go with us next time, etc. We started entering races that were not traditional marathons. My friends and I were traveling to run a race, and covering 50 - 60 miles for our races. It was a big commitment, and it increased my desire for data. I started looking at other runners' race reports and pictures on social media. I could look at the description and the runners' pictures, and get an idea if it was something I wanted to do. I could also look up the runner's time and race splits, and try to predict my own time based off of the information and my own data. Two years ago I joined Strava, the online running community. My runs upload automatically through Garmin, and I follow runners I know, and professional runners. . At first I thought I would be too insecure about my times to be posting them every day. But I love the data, and I use it to gauge what I'm doing based off of what my training partners are doing. Also, there are groups within the community. For example, I can join a training group for a particular race I'm going to run, not actually knowing any of those people. We all post our training runs, and I can see what types of plans people are following. I can adjust my plan accordingly. There are Strava virtual challenges as well. I can join a race or a monthly challenge for motivation, and encourage and get encouraged by other runners. The data is broken down by segment. So any route is broken down into small parts. You can compete with other runners or with yourself to get the fastest time on a particular segment. If I am too busy to sign up for a race or am not particularly motivated for my run, I can use those segments for motivation for the day. Of note is the ability to set privacy standards now. I can block out my regular routes, or parts of my run close to my house, or hide the map entirely. This innovation has made using these types of communities very friendly for women.

Overall, my life is enhanced with this technology. I am a very busy mom who works and goes to school, so I don't have time for as much in-person connection as I would like for motivation. Social media fills that gap, and I use the Garmin watch for goal motivation when I am alone. My observation as a coach is the technology would have enhanced my beginner programs quite a great deal. It also would have made that group more open to people who did not have the time to participate in person. My observation as a coach and participant, is that for someone to have consistent motivation, they need to be motivated both by external forces, such as a social support system, as well as an internal motivation. The fitness trackers combined with social media fits in very well with those characteristics.

[C]Expert Interview

Jeffrey Kline, endurance sports coach, owner, PRSFit
"I have been training runners and triathletes since 1999. I've trained countless numbers of athletes to personal best that include Boston Marathons, World Triathlon 70.3 Championships and Ironman Championships

PRS FIT is a community of athletes from all over the world. We are a team. Alone or together, from beginner 5k to Boston Marathon and 100 Miler, sprint triathlon to Kona, we strive and we conquer.PRS FIT lets you experience what we call Team and social fitness – connecting and motivating each through our one of a kind global team experience. No matter the weather, the circumstance, day after day, we provide a high quality training experience that produces results.

http://www.prsfit.net/

Link to interview:

https://cdn.fbsbx.com/v/t59.3654-21/18741076_10206610378937797_1914158815205392384_n.mp4/audioclip-1496764420000-358549.mp4?oh=e69216873fe317ca17245a06c7d83086&oe=5938B6E6&dl=1