
Pokémon GO And Mobile Wellbeing: Initial Observations On Experiences And Reported Connection

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Abstract

Pokémon GO has in short time attracted a large number of players in many countries. In this paper we initiate a discussion of the connection between Pokémon Go and wellbeing. While media have reported heavily on the game because of its immense popularity, there are not yet any published studies on its use. We conducted a brief pilot study on an open forum for Pokémon Go players. The players report a perceived strong connection between their health and the game, in terms of increased exercise, general wellbeing and enhanced social interaction. We conclude with a discussion of how these initial insights can be examined further using different methods.

Author Keywords

Pokémon GO; Mental health, Mobile wellbeing, Location-based gaming

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous

Introduction

Pokémon Go was first released July 5th 2016. Within 24 hours, it was the number one most downloaded app in app stores through all time. Two thirds of users who has downloaded the app report daily use, on average 43 minutes and 23 seconds every day, which is higher than WhatsApp, Instagram, Snapchat and Facebook Messenger [10]. Quite quickly after it was introduced, users and the media started to share stories of how this location-based game requiring users to walk in order to play, had affected movement patterns. For example, people have reported being motivated to spend more time outdoors [8] and to approach and interact with people they normally wouldn't talk to [5]. In this workshop submission, we want to address the connection of Pokémon Go to mobile wellbeing. We have conducted a brief pilot study to get users' feedback on the topic and use these initial results to discuss how a larger study could be conducted on the relevance of this mobile game for wellbeing.

Pokémon Go

Pokémon Go is a mixed reality game – it is played in both the physical world as well as a virtual world mapped on top of the physical world. It is played using an application downloaded to Android or iOS phones. The purpose of the game is to collect a variety of virtual creatures – pokémons – that can be found by either walking to a physical location that the pokémon is associated with (they appear randomly and only persist for 15 minutes), or by hatching eggs. Eggs are hatched by walking a certain distance. Players can also let their pokémons fight with other pokémons at so called gyms. By the very nature of the game, the game is played by moving around the the physical world while the game is running on a phone. Different locations afford different experiences. The location of a gym enables battles, and the location of a pokéstop enables collection of necessary items.

Pokémon Go and location-based gaming

While Pokémon Go is the most downloaded mobile game ever, it is not the first example of a mixed reality game. Location-based games have been studied extensively within HCI and other fields over the years [7]. While games have been studied, other types of services can act as layers on top of the physical world as well. Dating apps like Tinder and Grindr both use the physical proximity of users to allow making connections in the app, thus the movement of its users create ever changing experiences for its users. Of particular interest for our purposes is how the studies show how strangers in public interact (or choose not to) as a consequence of the introduction of such games. E.g. Blackwell and Birnholtz studied the tension between users and non-users of these services as they both interact in the same physical world [3]. The editor in chief for the Games and health journal calls in a short editorial note for studies of Pokémon Go and its implications for health [1]. He suggests that studies could be done based on a mix of methods including retrospective and concurrent data. Baranowski also lists over a dozen suggestions for topics to study, ranging from demographics and interaction with other players, to implications for future games that could be engineered in order to increase physical activity.

Media reports on Pokémon GO and its relevance for mobile wellbeing

The benefits of exercise to improve mental health are well known. However, when struggling with depression or similar mental issues, even a short walk might seem like a challenge. Since Pokémon Go is new, there are no scientific peer reviewed studies of this topic as of yet. However, the topic is currently heavily discussed in media, where psychologists have given their opinions

on the game's possible impact on users' mental health. A number of possible positive effects of playing Pokémon Go have been reported in relation to how the game may help people deal with mental issues. The main argument is that Pokémon GO provides a motivation for people by encouraging walking [9]. In addition, some mention the social aspect of the game as being positive as it provides a reason for people to interact with each other and could possibly help people who are socially isolated [4]. Pokémon GO could help people dealing with depression, phobias and social anxiety by being a distraction from their negative thoughts [2]. However, other psychologists claim that the game may actually have negative implications on users' health. For instance, some psychologists suggest that "apart from obvious safety risks of children getting lost, ran over or falling into lakes" [7], young people's development of social skills may be interrupted if engaging too much with the app [6].

What users say about the connection between Pokémon Go and wellbeing

In order to address the relationship between Pokémon Go and mobile wellbeing, we conducted a brief pilot study to get users' feedback on the topic by posting a question and asking the 26 769 members of the large Facebook group "Pokémon GO - Sverige" (Sweden) to share their experiences with us. The question was formulated as "Do you think that playing has affected your wellbeing and if so, how?". In 24 hours, this question received 88 open comments and 15 responses sent in private messages. Using thematic analysis three main themes emerged: *increased exercise*, *improved general wellbeing* and *enhanced social interaction*. Being a brief pilot study, there are of course inevitable limitations to it, however given the aim to understand

this still quite new phenomenon, the benefits of turning to heavy, initiated users outweighed the disadvantages.

Increased exercise

Initial results show that a great majority of the reported impacts of playing Pokémon GO were related to an increase in exercise. Some players mentioned that they look forward to getting outdoors and described how the game motivate them to get up and go for a walk: *"It feels easier to walk when you are looking for something or when there are like short stops"* (PM7). Some players reported having noticed a great change in how much they walk: *"Went from moving around on average 3 km per day to 13 km per day"* (86). It is perhaps most interesting that their attitude changed. That it "feels easier" is a testament of a change in attitude, rather than a testament of level of exercise.

Improved general wellbeing

A large number of the comments were also related to basically just "feeling better" (*"I feel that my wellbeing has improved a lot since Pokémon GO"* (34)). Players mentioned having gained more energy, losing weight, getting better sleep (*"I sleep better at night. I suspect that it's because I haven't moved around that much before Pokémon Go"* (3)) having their thoughts distracted and anxiety reduced (*"It distracts me from my anxiety I otherwise experience around the clock"* (74))

Enhanced social interaction

The third most common answer was related to the social impact of playing. This was discussed by players both in terms of spending more time with family and friends as well as getting to know new people:

"Stubborn 8-year-old son (adhd) who you usually have to nag and almost "throw" out all of a sudden wants to get out and move around! Totally amazing! And a fun thing that we can do together that we both enjoy" (31). Some users also mentioned impacts on their social anxiety and how playing the game has made it easier for them to interact with people: *"I rarely ever leave the room other than when I have to because of social phobia and severe depression. It has made me move from isolation to having a reason to actually go out. It even happens that I talk to new people without wanting to run away"* (68)

Discussion and future work

In this workshop paper we have initiated a discussion of the connection between Pokémon GO and wellbeing. As has been argued elsewhere [1], we need scientific studies, going beyond news reports, of what the implications are of this and similar games. Our study has a number of limitations that prevent us from generalizing and drawing any strong conclusions. However, we have increased our understanding of the reported experience of this game in ways that allow us to discuss how we would conduct further research in this area. This study was based entirely on reported use of the game, as comments within a forum for Pokémon GO. To conduct a more rigorous study of reported use, we would conduct interviews with a more varied group. For example, it would be interesting to follow up on players who stated that they have stopped playing because it caused them more stress, to get a more nuanced picture. In addition to studies of reported use it would be interesting to study the actual use of the game, and how it affect movement patterns. As noted by Baranowski, it would be difficult to make a comparison between before and after the release of the

game. One potential way to get around this would be to contact players that already used some app tracking their steps, and ask them for the data for this time period. Tracking app use and location would allow us to look at correlations between using the app, and mobility patterns, as well as other markers of mental health status, such as social media use, sleep patterns, etc. In addition to studying this topic through the game and the app, we could also do studies of public places. Particularly as a way to study co-located social interaction around the game, that users in our study mentioned as one important feature that affected their wellbeing. Public places where gyms or pokéstops are located can attract large numbers of users, which means that we see new opportunities for social interaction in public places. Although it has been found in previous studies of location-based gaming (e.g.[7]) that players are not prone to initiate contact with co-located strangers, users in our study reported that they do. We argue that the connection between Pokémon GO and wellbeing needs to be studied in more detail, and our pilot study indicates that there is a richness to the topic that we should address not only by talking to active players, but also by examining actual movement patterns as well as social interaction in public places.

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