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Pokemon Go moderately improves physical activity among adults; but effect was not sustained beyond 6 weeks

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Pokémon Go improves physical activity among adults who use the game, but the effect is moderate and not sustained over time, finds a study published in *The BMJ* Christmas issue this week.

Results show that the daily average steps during the first week of installation increased by 955 additional steps - equivalent to half of the World Health Organization's (WHO) recommendation for physical activity per week.

The following weeks saw a gradual reduction in the number of steps, and this effect was lost after six weeks of game playing.

Pokémon GO is an augmented reality game that projects graphics onto the real world using smartphones, and has been downloaded over 500 million times since its launch in July 2016.

It has been suggested that the game can increase physical activity and promote public health, because it incentivizes walking. However, these claims are based on anecdotal evidence.

So researchers from Harvard University, co-led by Katherine Howe, Christian Suharlim, and Peter Ueda, set out to determine whether playing the game had any effect on physical activity among young adults in the United States.

They conducted an online survey of 1,182 participants, aged 18-35, who used iPhone 6 series smartphones, during August 2016.

In total, 560 (47.4%) of the participants reported playing Pokémon GO at "trainer level" of 5 or more, which is reached after walking for around two hours.

Data were analysed from automatically recorded step count from the participants' iPhones and used to estimate the change in daily steps after installation of the game.

The findings show the daily average steps during the first week of installation increased by 955 additional steps.

Assuming steps of 0.8 m at a pace of 4 km/h, the change would translate into 11 minutes of additional walking daily - around half of the WHO's recommendation of 150 or more minutes weekly.

However, the number of steps gradually decreased over the following five weeks, and by the sixth week the number had returned to pre-installation levels.

The results remained the same even after accounting for a number of factors that may have influenced the findings, such as age, sex, race, weight status, and walkability of the area of residence.

The authors write: "Our results indicate that the health impact of Pokémon GO might be moderate. Even if smaller amounts of physical activity might also be important for health outcomes, the increase in steps from Pokémon GO, as with many physical activity interventions, was not sustained over time."

However, they remain optimistic.

In an accompanying video, senior author Eric Rimm, says: "What we found were exciting new findings that over a 6 week period you can do a lot to increase physical activity, we just have to be more creative about finding ways to get people to keep exercising."

They note that steps were recorded when the iPhone was carried, which may have led to overestimation of the game's effect on physical activity among the study participants, and the sample may not be representative of the general population.

Furthermore, they add that the effect of Pokémon GO on physical activity might be different in children, and there might also be other potential benefits associated with the game, such as increased social connectedness and improved mood.

More information: Gotta catch'em all! Pokémon GO and physical activity among young adults: difference in differences study, The *BMJ*, www.bmj.com/content/355/bmj.i6270

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