Cyber partners help you go the distance

May 16 2012

A new study, testing the benefits of a virtual exercise partner, shows that the presence of a moderately more capable cycling partner boosts motivation to stick to an exercise program. The work by Brandon Irwin and colleagues, from Michigan State University in the US, is published online in Springer's journal, *Annals of Behavioral Medicine*.

For many people, lack of motivation is a barrier to achieving both the recommended amount and intensity of exercise. Using the principles of group exercise, which is known to increase people's motivation to stick to an exercise program, the researchers investigated whether a virtually present partner would influence participants' motivation to exercise for longer.

A total of 58 young women, recruited from university-based physical activity courses, took part in the experiment and exercised on a stationary bike on six separate days, including one training session. They were split into three groups. The first group exercised independently alongside a virtual person. The second group also exercised alongside a virtual person but this time they worked as a team, and the performance of the team was determined by the weakest link i.e. the one who stopped exercising first. The third group cycled alone.

At the start of the experiment, the women in groups 1 and 2 were assigned a 'virtually present partner' - also a female - for the ride and were told that their partner would be riding at the same time they were, on a similar bike in another lab. The women 'met' their partners via a pre-recorded video-chat, and were told that their partner's performance was

moderately better than their own. During the exercise sessions, participants were able to track their partner's progress by watching the partner ride, on what looked like a live feed but was in fact a recording.

All students rode a video-game exercise bike for as long as they felt comfortable. They were then asked to rate their intention to exercise again, how well they felt they had done, and how tired they felt. The researchers measured how hard they had worked.

Overall, exercising with a virtually present partner improved performance on the cycling task: Participants cycled for longer when working alongside a more capable partner than when exercising alone. Across sessions, those women who exercised as part of a team cycled, on average, two minutes longer than those who exercised independently with a partner (22 versus 20 minutes), and twice as long as those who exercised without a partner (22 versus 11 minutes).

In terms of motivation, there was a marked decline in intent to exercise among those who cycled on their own. In contrast, those who cycled with a virtual partner reported no decline in motivation to exercise.

The authors conclude: "Being able to more than double one's performance is a substantial gain for those trying to increase their physical activity. These results are encouraging and suggest that the gains we observed over six hour-long sessions could be sustained on a longer-term program of exercise. This may be of particular value in future efforts to help people meet physical activity recommendations."

More information: Irwin BC et al (2012). Aerobic exercise is promoted when individual performance affects the group: a test of the Köhler motivation gain effect. *Annals of Behavioral Medicine*; DOI 10.1007/s12160-012-9367-4

Provided by Springer

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