Bidirectional association between stress and physical activity in adults with overweight and obesity.

Hypotheses have emerged indicating a 'bi-directional relationship' between physical activity (PA) and stress. Engaging in PA can improve stress resilience, and in parallel stress has been acknowledged as a barrier to PA engagement. It is reported that 'stressed individuals are less likely to feel motivated to exercise'. Given the pivotal role that PA plays in preventing weight gain, determining such barriers is important.

An internet-based program was delivered to 75 adults working in a healthcare organization (both employees and their dependences). The program consisted of a 3-month intervention period, followed by 9 months of observational maintenance in which participants had no access to the intervention materials (i.e., self-monitoring tools and resources such as a calorie reference book). In turn, participants were asked to report their activity and stress levels online each week (inclusive of the observational maintenance period).

The study reaffirmed that stress is a barrier to PA. An increase in stress was associated with 'less physical activity the same week and predicted fewer minutes the following week'. After 1 hour of exercise, participants reported a decrease in stress over the next 7 days. On average, participants engaged in 160 minutes of PA across the 12-month study duration. On a less positive note, however, engagement in PA declined after the 3-month intervention period, and overtime.

Future studies should identify enablers to PA so that positive behaviours can be sustained in the long term. particularly to understand whether adding 'intervention components to decrease stress or to reinforce PA improve PA engagement'.

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