Work Commute Quality Can Determine Performance on the Job

The mental strain commuting causes can be measured with wearable tech devices that confirm the impact travel has on employee productivity.

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Many employees fully appreciate that travel to and from work is highly stressful. Now, recent study findings published in a special issue of the online magazine IEEE Pervasive Computing show how wearable tech is able to gauge the effects of the daily commute and the negative impact it can have on the quality of work produced by employees, reports a press release from Dartmouth University.

For the inquiry, researchers used mobile phones and activity trackers to gather data from 275 people in different areas of the country who were employed in the information industry. Scientists gathered data while workers commuted to and from their jobs for a one-year period prior to the coronavirus pandemic. In addition, investigators monitored each person before and after they traveled to work as well as during their commute. (Almost 95% of people drove to work.)

The consumer tech devices also noted location, weather, how long people traveled, and changing variables over the course of the commute.

“We were able to build machine learning models to accurately predict job performance,” said Subigya Nepal, a PhD student in computer science at Dartmouth College and the lead author of the study. “The key was being able to objectively assess commuting stress along with the physiological reaction to the commuting experience.”

Scientists noted that workers who were highly productive at work were more resilient in response to stress and more physically fit. Researchers also observed that those who performed poorly at work were more likely to use their phones while commuting.

“Compared to low performers, high performers display greater consistency in the time they arrive and leave work,” said Pino Audia, PhD, a professor of management and organizations at the college’s Tuck School of Business and a coauthor of the study. “This dramatically reduces the negative impacts of commuting variability and suggests that the secret to high performance may lie in sticking to better routines.”

Scientists predict that in the future sensory technology will recognize commuter stress and provide ways for people to relieve the tension created by traveling to work. Some de-stress interventions would include music, podcasts, connections to family and friends or suggestions for short stops commuters could make to relieve pressure from negative experiences while traveling to work.

To learn more about how the body responds to stress, read "Study Finds Dopamine Is Released in Response to Both Pleasure and Stress."

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