

Day-To-Day Variations in Health Behaviors and Daily Functioning: Two Intensive Longitudinal Studies

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Abstract : Objective: Health behaviors tend to show a high variability over time within the same person. However, most existing research can only assess a snapshot of a person's behavior and not capture this natural daily variability. Two intensive longitudinal studies examine the variability in health behavior over one academic year and their implications for other aspects of daily life such as affect and academic performance. Can already a single day of increased physical activity, snacking, or improved sleep have beneficial effects? Methods: In two intensive longitudinal studies with up to 65 assessment days over an entire academic year, university students (Study 1: N = 292; Study 2: N = 304) reported sleep quality, physical activity, snacking, positive and negative affect, and learning goal achievement. Results: Multilevel structural equation models showed that on days on which participants reported better sleep quality or more physical activity than usual, they also reported increased positive affect, decreased negative affect, and better learning goal achievement. Higher day-to-day snacking was only associated with increased positive affect. Both, increased day-to-day sleep quality and physical activity were indirectly associated with better learning goal achievement through changes in positive and negative affect; results for snacking were mixed. Importantly, day-to-day sleep quality was a stronger predictor for affect and learning goal achievement than physical activity or snacking. Conclusion: One day of better sleep or more physical activity than usual is associated with improved affect and academic performance. These findings have important implications for low-threshold interventions targeting the improvement of daily functioning.

Keywords : sleep quality, physical activity, snacking, affect, academic performance, multilevel structural equation model

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