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Title:

Exploring Dyadic Interactions in Type II Diabetes: Insights from a Naturalistic Observation Study

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Abstract body (250/250 words)

Background: Type II diabetes mellitus (T2DM) is a chronic disease requiring to initiate and sustain changes in multiple health behaviors. Management of chronic disease often occurs in a social context, and supportive interactions are crucial for the management of disease-associated challenges. As romantic partners affect each other's health in a day-to-day context, the current study takes a naturalistic observation ambulatory assessment approach to explore the feasibility of studying everyday supportive interactions. Methods: Participants with T2DM and their romantic partners ($N = 11$ dyads) wore smartwatches that periodically captured brief 5-min audio recordings of ambient sounds multiple times a day over seven days to observe couples' dyadic T2DM management in their natural context. Results: A total of 992 5min audio files were gathered and coded by trained research assistants. 73% of the audio files contained speech whereof most were recorded at home (78%) and included talking with the romantic partner (88%). Supportive interactions were topic of approximately 6% of couples' conversations, and they were more often informational (67.5%) than emotional (32.5%). Conclusions: This naturalistic observation study of everyday supportive interactions revealed that this method could be implemented within the sensitive context of dyadic T2DM management and detecting supportive interactions in everyday life. As a complement to laboratory and other ambulatory assessment methods, a naturalistic observation approach with audio recordings can contribute to a more comprehensive understanding of everyday supportive interactions in couples' management of T2DM which could be used to tailor programs supporting couples living with T2DM in their everyday life.