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**The Potential of Ecological Momentary Assessments in the Prediction of Suicidal Ideation: A Feasibility Study**

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**Background:** More than 800 000 people commit suicide every year. This calls for better predictors and prevention. Yet, the temporal dynamics of suicidal ideation make this challenging. A solution might be ecological momentary assessments (EMA). The real-time, real-world data collection might capture the temporal dynamics and help identify predictors. We tested the feasibility of EMA in a high-risk population and examined the predictive value of sleep quality, a promising predictor and modifiable risk factor.

**Methods:** We included patients across diagnoses with suicidal ideations from the University Hospital of Psychiatry Zurich, Switzerland. Patients used an in-house developed app with 5-times daily EMA for 28 days during the most critical period for suicides: hospital discharge. EMA data was analyzed with a random intercept, random slope model. **Results:** We included 15 patients (females: n=12, age: M=31.20±12.71 years) who were clinically depressed (Beck Depression Inventory: M=30.63±14.19) and reported suicidal ideations (107 of 455 EMA in the first week, 23.5%). Of the 455 EMA in the first week, more than half were completed (n=230, 50.5%). We found no evidence that sleep quality predicted suicidal ideation ( $\beta=-0.25$ ; 95%CI,-0.59, 0.04; P = 0.12). **Conclusions:** We showed that EMA allow to assess suicidal ideations, even in a high-risk population, and to capture its temporal dynamics which is important for an adequate estimation of suicidal ideations to identify reliable predictors and ultimately develop effective treatments. Sleep quality was not a predictor for suicidal ideation, which might be due to the limited sample size and requires further investigation in a larger sample.

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