Project title:

Investigating momentary mechanisms and heart rate variability in a sample of patients with chronic musculoskeletal pain: An experience sampling study

Description:

Chronic musculoskeletal pain is associated with a range of psychological symptoms and a biopsychosocial model of pain is now widely applied to explain the development and inform the treatment of chronic pain conditions. The experience sampling method has become a common method to investigate momentary outcomes in the daily life of participants. Using experience sampling and sensor data from the PerPain study, this project aims to investigate momentary mechanisms related to stress sensitivity and trajectories of pain catastrophizing. Further, heart rate variability as a measure for autonomic balance in chronic musculoskeletal pain will be investigated

Methods:

Experience sampling data on pain intensity, attention to pain, pain catastrophizing, fear of pain, affect, subjective activity, stress and momentary quality of life was collected via smartphone app 10 times per day on 8 consecutive days in 60 patients with a diagnosis of chronic musculoskeletal pain and 15 healthy controls. Participants' heart rate was recorded once per minute during the whole ESM period using a movisens EcgMove 4 sensor. To account for the multilevel structure of the experience sampling data (observations nested within individuals) multilevel regression models will be used for statistical analysis.

Key publications:

Reininghaus U, Böhnke JB, Chavez-Baldini U, Gibbons R, Ivleva E, Clementz BA, Pearlson GD, Keshavan MS, Sweeney JA, Tamminga CA. Transdiagnostic dimensions of psychosis in the Bipolar-Schizophrenia Network on Intermediate Phenotypes (B-SNIP).World Psychiatry. 2019 18(1):67-76.

Myin-Germeys I, Kasanova Z, Vaessen T, Vachon H, Kirtley O, Viechtbauer W, Reininghaus U. Experience sampling methodology in mental health research: new insights and technical developments.World Psychiatry. 2018 17(2):123-132.

Klippel A, Myin-Germeys I, Chavez-Baldini U, Preacher KJ, Kempton M, Valmaggia L, Calem M, So S, Beards S, Hubbard K, Gayer-Anderson C, Onyejiaka A, Wichers M, McGuire P, Murray R, Garety P, van Os J, Wykes T, Morgan C, Reininghaus U. Modeling the Interplay Between Psychological Processes and Adverse, Stressful Contexts and Experiences in Pathways to Psychosis: An Experience Sampling Study.Schizophr Bull. 2017 43(2):302-315.

Contact details:

Ulrich.reininghaus@zi-mannheim.de