**Highlights SAA 2019**

In June 2019 the biennial meeting of the Society for Ambulatory Assessment (SAA) took place in Syracuse (USA). A delegation of the ICPE went to visit the SAA.

Below, you will find a collection of the SAA presentations that were deemed very interesting and fitted well with the research that is also performed at the ICPE.

For complete abstractbook and program, see: <http://repeatlab.syr.edu/saa2019/program/>

Contents

[Laura Bringmann, Keynote presentatie: Network models in psychology – More than a pretty picture? 1](#_Toc13478011)

[Wolfgang Viechtbauer, Maastricht University: Changes in response behavior over time in ESM studies: Is there reason for concern?. 2](#_Toc13478012)

[Jojanneke Bastiaansen: Time to get personal? The impact of researchers’ choices on the selection of treatment targets using experience sampling methodology: challenges for clinical implementation. 2](#_Toc13478013)

[Ginette Lafit, KU Leuven: Challenges in conducting power analysis in Experience Sampling Studies 2](#_Toc13478014)

[Timothy Brick, Pennsylvania State University: Lowering Burden in Ecological Momentary Assessment: Measurement Approaches and Real-Time Methods to Reduce Participant Burden 3](#_Toc13478015)

[Timothy Trull, University of Missouri: Ambulatory Assessment in Psychopathology Research: A Review of Current Practices and Recommended Guidelines 4](#_Toc13478016)

[Symposium: The Promise and Perils of Integrating Wearable Sensors into Research on Suicidal Thoughts, Behaviors, and their Risk Factors 4](#_Toc13478017)

[Symposium: Methodological issues in ambulatory assessment: Compliance, attrition, delayed responding, recall bias, and changes in response behavior over time 4](#_Toc13478018)

# Laura Bringmann, Keynote presentatie: Network models in psychology – More than a pretty picture?

Link to presentation: [https://www.dropbox.com/s/u5ia5rms6jm4f7o/Keynote\_SAA.pdf?dl=0](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.dropbox.com%2Fs%2Fu5ia5rms6jm4f7o%2FKeynote_SAA.pdf%3Fdl%3D0&data=02%7C01%7Cm.zuidersma%40umcg.nl%7C9e93fda26a0c4c99928508d70385ed4d%7C335122f9d4f44d67a2fccd6dc20dde70%7C0%7C1%7C636981746053531004&sdata=d8aeVUhn%2FINflNOhSg%2BTgYWbjCxYtWF1gOUuwu%2FeVmk%3D&reserved=0)

Laura Bringmann, *University of Groningen, Psychometrics Statistics Department*

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# Wolfgang Viechtbauer, Maastricht University: Changes in response behavior over time in ESM studies: Is there reason for concern?.

Zijn conclusie was dat er wat aanwijzingen voor een leerproces zijn en weinig aanwijzingen voor “careless responding”. Herhaald meten zou de kwaliteit van de metingen dus mogelijk kunnen verbeteren.

Wolfgang Viechtbauer: *Center for Contextual Psychiatry, Department of Neuroscience, KU Leuven; Department of Psychiatry and Neuropsychology, School for Mental Health and Neuroscience, Maastricht University*

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# Jojanneke Bastiaansen: Time to get personal? The impact of researchers’ choices on the selection of treatment targets using experience sampling methodology: challenges for clinical implementation.

*Jojanneke Bastiaansen: Department of Psychiatry, Interdisciplinary Center Psychopathology and Emotion Regulation, University of Groningen, University Medical Center Groningen; Department of Education and Research, Friesland Mental Health Care Services*

Link to presentation: <https://ilab-psychiatry.nl/wp-content/uploads/2019/07/Bastiaansen_ManyLabs_20190614.pdf>

Link to preprint: <https://psyarxiv.com/c8vp7/>

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# Ginette Lafit, KU Leuven: Challenges in conducting power analysis in Experience Sampling Studies

**Short description:** power analysis for multi-level ESM studies. They developed the “shiny app”: an HTML-app (on a website), which performs the power analysis. It runs R on the background, but you don’t need R on your computer to use it.

**Abstract:**

Researchers that are interested in using the Experience Sampling Method (ESM) or pre-registering a study based on data collected using ESM, need to determine the number of participants in order to maximize the likelihood of detecting a hypothesized effect. This can be achieved by performing a power analysis. A study with low statistical power reduces the probability that a detected effect is true in the population as well as limiting reproducibility of results. The data obtained from an ESM study have a multilevel structure, in which repeated observations over consecutive days are nested within an individual. Power calculations in ESM studies are challenging because of this nested data structure. To conduct a power analysis for ESM studies, the investigator has to take into account the number of occasions the ESM is conducted, the between subject variability and the serial correlation between observations within an individual. Power calculations are a crucial component of high quality pre-registrations- a cornerstone of open science practices- and aid the reproducibility of results. In this presentation, we are going to present general guidelines to perform power analysis in ESM studies using a simulation based approach when we want to test a hypothesized effect and we assume we can model this effect with a multilevel regression model. We present a case in which power analysis is required and there is uncertainty about the model parameters used to test the hypothesized effect. Finally, we will discuss the importance of considering the consequences that model misspecification has on determining the number of participants in an ESM study.

*Ginette Lafit PhD, Center for Contextual Psychiatry, KU Leuven, Leuven, Belgium*

*Janne Adolf PhD, Research Group on Quantitative Psychology and Individual Differences, KU Leuven, Leuven, Belgium*

*Wolfgang Viechtbauer PhD, Psychiatry & Neuropsychology, School for Mental Health and Neuroscience, Fac. Health, Medicine and Life Sciences, Maastricht University, Maastricht, Netherlands*

*Inez Myin-Germeys PhD, Center for Contextual Psychiatry, KU Leuven, Leuven, Belgium Eva Ceulemans PhD, Research Group on Quantitative Psychology and Individual Differences, KU Leuven, Leuven, Belgium*

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# Timothy Brick, Pennsylvania State University: Lowering Burden in Ecological Momentary Assessment: Measurement Approaches and Real-Time Methods to Reduce Participant Burden

**Short description:**

They used latent class kind techniques to reduce the number of items in EMA questionnaires (in order to reduce burden for participants). This was done on an individual person level and was possible already starting from 20 assessments.

**Abstract**

Ambulatory survey tools such as smartphone-delivered surveys provide an excellent window into the momentary experiences of participants as they go about their lives. As researchers become interested in changes and transitions at smaller and smaller timescales, increasingly dense longitudinal data is required to capture the processes at work. Yet this dense measurement comes at cost—active assessment tools like surveys place a burden on participants in terms of the time, attention, effort, and disruption of daily activities that they induce. In this talk, we present two different approaches to limiting the burden on participants based on EMA studies. In studies tied to passive and wearable sensors, or in which real-time models are capable of predicting the values under study, surveys can be adaptively triggered based on the expected predictive accuracy. In cases where survey tools compute correlated factor structures, synthetic aperture approaches from the world of personality can be adapted to subselect questionnaire items. We present evidence from simulation and empirical results to highlight the utility of these approaches.

*Timothy R Brick PhD, The Pennsylvania State University*

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# Timothy Trull, University of Missouri: Ambulatory Assessment in Psychopathology Research: A Review of Current Practices and Recommended Guidelines

**Short description:**

This was a presentation about a systematic review of what type of information is reported by EMA/AA/ESM studies. Main message: we are not doing a great job in reporting the relevant information of our studies. T. Trull mentioned that their paper would contain an EMA/AA reporting template which he suggested that everyone could use and add as supplemental materials to the paper. Such a template may also help in checking ourselves whether we’ve reported all relevant information about the study protocol in the methods section. In addition, it will also make it easier to do a review/systematic meta-analyses of EMA research. I could not yet find the paper online, so also do not have an idea of what the template looks like.

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# Symposium: The Promise and Perils of Integrating Wearable Sensors into Research on Suicidal Thoughts, Behaviors, and their Risk Factors

**Chair: Evan Kleiman, Rutgers University**

This was a symposium on the usage of Skin conductance wearables to pick up on distress associated with suicidal behavior/thoughts/self harm. They presented a couple of studies.

**Evan Kleiman** presented a study that  investigated whether skin conductance can be used as a marker of distress for suicidal adolescents inpatients that can be used to warn nursing staff that the adolescent is distressed.

**Ashley Walton (on behalf of Walter Dempsey; both Harvard University**) presented work on developing the necessary statistical techniques to detect relevant signals in skin conductance that can function as such a warning signal.

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# Symposium: Methodological issues in ambulatory assessment: Compliance, attrition, delayed responding, recall bias, and changes in response behavior over time

**Chair: Wolfgang Viechtbauer**

**Most interesting talks in this symposium:**

**Hugo Vachon (KU Leuven)** presented results of a meta analysis and systematic review about compliance and retention with ESM over the continuum of severe disorders. The paper is published and might provide insight on these topics in our own studies.

**Wolfgang Viechtbauer (KU Leuven / Maastricht University)** presented work on possible explanations for the changes in response behavior (e.g., initial elevation bias, more similar responses to items over time) that we observe during ESM studies. He mentioned that changes may occur due to 1) participants wanting to decrease the burden, 2) they may improve in affect due to more self awareness as result of ESM, or 3) it may be indicative of a calibration process. It seems that within-person variances decreases over time, which may suggest an increased tendency of giving standard responses. However, evidence of changing associations between variables over days was limited. Therefore, he concluded, that it is not likely that individuals give the same standard response to all variables, or provide just a random response, which both would be the case if changes in responses were due to individuals decreasing the burden of participation.

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# Harriette Riese (University of Groningen): Introduction on personalized ESM in clinical practice

In this introduction, a rationale is given why we should consider a scientific method as ESM, designed for data collection, as a tool in mental health care. In our opinion, one of the main goals of a diagnostic system should be that it improves on the matching of the right patients to the right treatment. It is becoming increasingly clear that our current (e.g. DSM) diagnostic classification does not represent clinical reality, as patients with the same diagnosis are highly heterogeneous in terms of symptomatology, underlying pathophysiological mechanisms and clinical course. Also, comorbidity is high and patients with different diagnoses may show overlapping symptom profiles. This heterogeneity likely plays a role in the overall modest efficacy of current treatments. A recent refinement is the addition of dimensional measures, assessed with questionnaires, which allow patients to score differently on different dimensions of symptoms. However, ideally, we would need another level of refinement to improve diagnostic assessment, as the use of dimensional symptom measures is still not optimal. These are outlined in the current presentation, arguing that personalized ESM before, during and after treatment may be useful to monitor symptoms and potentially predict relapses.

Link to presentation: <https://ilab-psychiatry.nl/wp-content/uploads/2019/07/Riese_SAA2019_v2.pdf>