schizophrenia and predominantly negative symptoms ($n = 487$). Symptom networks were tested at baseline for severity and on change with mixed models for the total sample, as well as in amisulpride and control samples.

**Results:** Within baseline and endpoint networks: symptoms grouped into Affect, Poor responsiveness, Lack of interest, and Apathy-inattentiveness; the most central symptom was Decreased Spontaneous Movements and least on Grooming and Hygiene. These networks did not statistically significantly differ. For the adjusted change score networks Affect, Poor responsiveness and Lack of interest remained, but Apathy-inattentive symptoms split. In the total group, amisulpride and placebo on Poverty of Speech was the most central item. In the total and amisulpride groups the least central item was Grooming and Hygiene, whereas in the placebo group it was inappropriate affect. The placebo and amisulpride networks did not significantly differ.

**Discussion:** This is first study to consider negative symptoms as a network. Results demonstrated: (I) a replicable negative symptom system; (II) symptoms with high centrality (e.g., poverty of speech) that may be future treatment targets.

**S63. Prediction of transition to psychosis in patients with a clinical high risk for psychosis: a systematic review of methodology and reporting**

Enich Studerus*, Avinash Ramyead, Anita Riecher-Rossler

1 University of Basel Psychiatric Clinics, Center for Gender Research and Early Detection

**Background:** Meta-analyses suggest that among help seeking patients with a clinical high risk (CHR) for psychosis only about one third develop psychosis within 5 years and about one third is having a clinical remission within 2 years. Hence, in order to improve clinical decision making in these patients, recent research efforts have been increasingly directed towards estimating the probability of developing frank psychosis on an individual level using multivariable clinical prediction models. However, despite considerable research efforts in this area, no psychosis risk prediction model has yet been adopted in clinical practice. One possible reason for the lack of progress in this area could be the widespread use of poor methods. Thus, the aim of this study was to systematically review the methodology and reporting of studies developing or validating models predicting psychosis in CHR patients using rigorous quality criteria.

**Methods:** A systematic literature search was carried out (up to September 18, 2015) in order to find all studies that developed or validated a multivariable clinical prediction model predicting the transition to psychosis in CHR patients. Data were extracted using a comprehensive item list which was based on the recently published Checklist for critical Appraisal and data extraction for systematic Reviews of prediction Modelling Studies (CHARMS) and current methodological recommendations of text books and articles on clinical prediction modelling.

**Results:** Eighty-six studies met the inclusion criteria. Although all included studies had applied a multivariable prediction model, most of them did not directly aim at developing a model for clinical practice. Instead, they made use of these models for hypothesis testing or aimed at evaluating the predictive potential of certain predictors or assessment domains. Consequently, only 7 studies (8%) were classified as model development studies and 79 (92%) as predictor finding studies. None of the retrieved studies performed a true external validation of an existing model. The average number of events per considered predictor variable (EPV) was 1.8 and 3.1 in model development and predictor finding studies, respectively. Only 2 studies (2.5%) had an EPV of at least 10, which is the recommended minimum for sufficient power. Internal validation was carried out in only 13 studies (15%) and six of these used inefficient or severely biased methods, such as split-sampling or cross-validating only the final model and thereby not taking into account the uncertainty introduced by variable selection. Other frequently observed modelling approaches not recommended by methodologists included univariate screening of candidate predictors, stepwise variable selection with low significance threshold, categorization of continuous predictor variables, and poor handling and reporting of missing data.

**Discussion:** Our systematic review revealed that poor methods and reporting are widespread in prediction of psychosis research. Since most studies relied on relatively small sample sizes, did not perform internal or external cross-validation, and applied modelling strategies that are prone to overfitting and overoptimistic predictive performance estimation, the results of these studies must be interpreted with great caution. To enhance progress, future studies should develop prediction models in accordance with current methodological recommendations and best practices, such as the recently published Transparent Reporting of a Multivariable prediction model for Individual Prognosis Or Diagnosis (TRIPOD) statement.