### **SUMMARIES**

Viheke Bliksted:

### Theory of mind subgroups in schizophrenia

This paper gives an overview of state-of-the-art theory of mind (ToM) deficits in schizophrenia and patient subgroups.

Only a few studies have directly compared ToM in people with autism spectrum disorders to patients with schizophrenia. Several meta-analyses have had no luck differentiating between ToM deficits in the two disorders. Results indicate that current research has compared high functioning people with autism to patients with a chronic course of schizophrenia.

Within the group of patients with schizophrenia, considerable differences in ToM have been found. State-of-the-art theory of mind suggests that specific aspects of negative symptoms are related to more severe ToM deficits. No clear correlation has been established between the level of psychotic symptoms and ToM. Patients in remission have fewer ToM deficits. However, patients with apparently no ToM deficits have been shown to have abnormal brain activity in the mentalising network. These results indicate that the patients mentally have to work harder when interacting socially with other people.

Current evidence indicates that patients with schizophrenia should routinely be social cognitive tested in order to offer the most optimal treatment.

## Anna Maj Bundsgaard:

## Measurement of social cognitive deficits in schizophrenia

This review investigates how to test social cognitive deficits in adults (>18) with schizophrenia based on international recommendations for testing the social cognitive domains of Theory of Mind and emotional processing. Exemplified by the two highly recommended tests Hinting Task and MSCEIT, the aim is to gain further insight into the clinical estimation of social cognitive disabilities in healthy controls. The review thus consists of an examination of published research, as well as test procedures. The findings reveal that healthy controls perform significantly better on the Hinting Task and MSCEIT than people with schizophrenia. However, results also indicate that ceiling effects and cognitively demanding tasks might influence data. Consequently, the importance of paying attention to both the ecological validity and clinical applicability of these tests is accentuated.

### Anna Maj Bundsgaard and Vibeke Bliksted:

## Measurement of social cognitive deficits in healthy Danish adults

The aim of this study was a) to examine how healthy Danish adults perform on a selection of social cognitive tasks (TASIT, Animated Triangles, Brünes Picture Arrangement), and b) to examine the potential social cognitive content of two cognitive tasks (Picture Arrangement WAIS-III and Family Pictures WMS-III) that have good Danish norms. 46 Danish, healthy participants aged 20-38 completed a comprehensive test battery. Results showed that the social cognitive tasks differed in quality with regard to the level of complexity and dispersion of scores. The tests did not show any performance variation when allowing for gender. Finally, the results highlighted a great potential in one of the two cognitive tasks with regard to estimating the social cognitive domain of Theory of Mind.

### Mia Ilsø Mahneke:

## Visual Level 1 perspective taking in schizophrenia

Being able to judge what is visually apparent to other people provides valuable information in social situations. As social cognitive impairments have repeatedly been connected to schizophrenia, this review sought to get a better understanding of the abilities of people with schizophrenia to judge nonegocentric Level 1 perspectives. Level 1 perspective is one of two levels of perspective taking. A systematic search for published scientific articles was conducted, and five articles met the listed criteria for inclusion. The studies examined different aspects of visual perspective taking which is reflected in the diverse findings of the studies. The results showed a slight tendency towards patients performing worse compared to healthy controls when having to judge a perspective that was not their own. With results from only a small number of studies focusing on this area, it is at this point difficult to suggest something unambiguous and reliable about visual perspective taking abilities in schizophrenia. Future studies should continue to examine how visual perspective taking abilities manifest in schizophrenia, as these abilities may be essential to the formation of higher-order social cognitive processes.

### Thea Reinholdt Jacobsen:

# Can you talk about schizophrenia in remission without also talking about (social)cognition?

Background: Schizophrenia is costly to the affected individual, as well as to society. In relation to the recent debate on whether it should be possible to be declared healthy from psychiatric diagnoses, a definition of the diagnosis of schizophrenia in remission has been requested from the political side.

Method: Through reviews in PubMED, PsycINFO and Embase, five reviews, containing critical analysis of and research based on The Remission in Schizophrenia Working Groups (RSWG) consensus criteria are included in this literature study.

Results: Remission is a temporary condition, defined by symptom reduction in core symptoms, such as delusions and hearing hallucinations. The RSWG criteria are valid and applicable in research and clinical practice. Remission rates vary across studies (17-88%). Early treatment response, the severity of baseline symptoms, premorbid function level, duration of untreated psychosis, and drug compliance are predictors of remission. Remission is associated with an increased functional level, but not synonymous with this.

Discussion: Based on significant evidence, it is discussed whether it makes sense to talk about remission without simultaneously including neuro- and social cognition, which, in contrast to the core symptoms, correlates highly with functional level.

### Asger Graversen:

### Social cognition, psychotherapy and psychotic disorders

# - A systematic review of the effects of social cognition on the outcome of psychotherapy for schizophrenia and other psychotic disorders

This article presents a systematic review of selected literature on "social cognition, psychotherapy, and psychotic disorders" published between 2008 and 2018. The aim of the review is to investigate current findings on the interaction between social cognition and psychotherapy for psychotic disorders. More specifically, the study investigates: 1) whether the level of social cognitive functioning can predict the outcome of psychotherapy 2) which effects psychotherapy have on the level of social cognitive functioning, and 3) whether a change in the level of social cognitive functioning mediates a change in the outcome of psychotherapy. The included literature consists of seven studies that investigate different aspects of the aim. The results imply that a reduced level of social cognitive functioning to a small extent predicts and limits the outcome from psychotherapy, psychotherapy does not have an effect on the level of social cognitive functioning, and the change in the level of social cognition does not mediate a change in the outcome of psychotherapy. The research field is minimal, and therefore, more research is needed. Theory on social cognition/psychotherapy and studies on social skills training/social cognitive training implies a relevant interaction between social cognition and psychotherapy.

#### Laura Emilie Schmidt

# Intranasal Oxytocin Treatment of Impairments in Theory of Mind in Patients with Schizophrenia

Motivation: The psychiatric disease schizophrenia is characterised by considerable impairments in social cognition.

Impairments in the social cognitive domain Theory of Mind, ToM, are strong predictors of social- and community functioning and thus crucial for the overall outcome. The neuropeptide oxytocin, OT, has been suggested as a possible treatment of the social cognitive impairments in schizophrenia.

Objective: The purpose of this study is to review the effect of intranasal OT on ToM in patients with schizophrenia.

Methods: A free-text search was conducted in the databases PubMed and Embase and based on inclusion- and exclusion criteria, six individual RCT-studies comparing OT with placebo were included in this review. The daily OT-doses varied from 40 to 48 IU, and the duration of the treatment varied from a single dose to four months of OT-treatment. ToM was assessed with tests at baseline and after the intervention.

Results and conclusion: No significant between-group effect of OT compared with placebo was found in the included studies.

Further knowledge of the working mechanisms of OT in social cognition and the interactions with antipsychotic medication is needed.

### Nicolai Ladegaard:

## Social cognitive impairment in patients with depression

Social cognition is a valuable construct in understanding cognitive impairment in depression and well-known psycho-social difficulties. The article is critical towards the one-sided focus on non-social cognitive assessment in unipolar depression. A basic taxonomy for social cognition is presented including the following domains: decoding of emotional stimuli, representation of mental states and reflectivity.

An overview of scientific findings on social cognitive impairment in unipolar depression is presented as is the interdependence between social- and non-social cognition and social cognitive impairment and psycho-social difficulties.

Finally, psychotherapeutic and pharmacological interventions targeting social cognitive impairment are presented.

### Cathriona Cantio:

# How do we measure Theory of Mind in adolescents and adults with autism spectrum disorders?

It is commonly agreed that Theory of Mind (ToM) is one of the core cognitive deficits and that it is strongly linked to the social communicative problems experienced by people with Autism Spectrum Disorders (ASD).

For many years, ToM research in ASD has focused on early development and childhood, but recently more attention has been put on ToM-deficits in adolescence and adulthood. Still, however, there are major methodological concerns in regard to 1) The test-performance is not comparable with every-day ToM-deficits, 2) The cognitive deficits found in these tests cannot explain the complete ASD-symptomatology, and 3) The ToM-tests are difficult to apply in everyday clinical practice.

This paper gives a short historic introduction to ToM in ASD and hence moves on to the latest advantages in ToM-research in ASD in adolescents and adults. Finally, it is discussed how ToM should be measured in people with ASD in the future, both in regard to research and clinical practice.

### Patrick K. Bender:

# Social cognition from a developmental perspective: Theory of mind and emotion understanding

This article aims to provide an initial review of the literature on the development of social-cognitive abilities. That is, the ability to understand human interactions and behaviour based on underlying mental and emotional states. With an emphasis on adaptive social relations, the importance of well-functioning social-cognitive skills is highlighted. Two central areas, namely theory of mind and emotion understanding, are introduced and key developmental milestones summarised. Theoretical accounts on the development of social cognition are outlined and discussed. The review touches briefly on precursors to childhood social-cognitive skills, atypical development in autistic and deaf children, as well as on the development of advanced social cognition during adolescence and adulthood.

### Emilie Sloth Grønbæk and Dion Sommer:

# Epigenetic developmental transactions in the early attachment relationship

Epigenetic processes are increasingly recognized for their importance in human development, e.g. how early life events can have long-lasting consequences for neurobiological development and behavior. Furthermore, epigenetics are increasingly taken into account in understanding the devel-

opment of disease and psychopathology, but are also linked to normative development. In this paper the attachment relationship between child and caregiver is ascribed great importance to the development of the child throughout the course of life. Based on excerpts from Thomsen (2018), we will consider the importance of the combination of epigenetics and attachment for the psychological development of the child based on the relatively new paradigm: developmental science. The understanding of psychological development is expanded to include three levels of epigenetic transactions in the early attachment relationship: 1) prenatal – in the fetal state, 2) postnatal – in the attachment relationship, and 3) inter- and transgenerational – across generations.