estradiol level pretreatment. But few study reports the relationship between abnormal menses and the dose or the length of the medicine. This study got negative results, which suggest the occurrence of abnormal menses widely depend on individual quality rather than the length and the dose of the antipsychotic. But there are some limits in the study. First, the dosage range among these subjects were relatively narrow. And then, the length of risperidone treatment is generally short. In the next step of research, we will improve these two points.

F58. COMMUNITY-BASED MULTI-SITE RANDOMIZED CONTROLLED TRIAL OF BEHAVIORAL ACTIVATION FOR NEGATIVE SYMPTOMS OF INDIVIDUALS WITH CHRONIC SCHIZOPHRENIA

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Background: As existing treatments for negative symptoms in schizophrenia have limited empirical support, development of effective treatments for negative symptoms in schizophrenia is in urgent need. Behavioral activation (BA), which is an evidence-based treatment for depression, is a promising candidate treatment for negative symptoms as it proved its feasibility and preliminary efficacy in non-randomized controlled trial for community dwelling individuals with chronic schizophrenia (Choi et al., 2015; Mairs et al., 2011). The primary purpose of the current study was to investigate whether BA would improve negative symptoms as compared with treatment as usual (TAU) for community dwelling individuals with chronic schizophrenia in a multi-site randomized controlled trial. In addition, we explored whether BA would improve other psychiatric symptoms, quality of life and neuro-cognitive functioning.
Methods: For multi-site trials, mental health professionals were trained with BA manual (Choi et al., 2015) and their fidelity was checked by the authors. BA was delivered in a group format once a week for 10 weeks. Participants aged 18 years or older were recruited from community mental health centers and day hospitals in Seoul and Gyeonggi-do area. A total of seventy-two patients with negative symptoms of schizophrenia were randomly assigned into either BA+TAU or TAU. As a primary outcome, negative symptoms were measured using clinical interviews (e.g., BNSS, CAINS, PANSS negative symptoms factor) and self-report questionnaires (i.e., MAP-SR) before and after the 10-week treatments. The secondary outcome measures included other psychiatric symptoms, quality of life, and neuro-cognitive assessment.
Results: BA was well accepted by community dwelling individuals with chronic schizophrenia (drop-out rates of BA+TAU and TAU, 10% and 14%, respectively). Intention-to-treat analyses indicated that compared to TAU condition, BA+TAU group showed greater improvement in negative symptoms, as measured by CAINS, BNSS, and PANSS negative symptom factor (Time*Group interaction effects, $F=7.476$, $p<.01$ for CAINS total; $F=5.663$, $p<.05$ for BNSS total; $F=6.092$, $p<.05$ for PANSS negative symptoms factor). In addition, the results indicated group differences in favor of BA+TAU on the PANSS general psychopathology factor and the Quality of Life, but not neurocognitive functioning (Time*Group interaction effects, $F=5.660$, $p<.05$ for PANSS general psychopathology factor; $F=7.541$, $p<.01$ for QOL total).
Discussion: The results of the current study demonstrate the feasibility and the efficacy of BA+TAU for negative symptoms of community dwelling individuals with chronic schizophrenia as compared to TAU when delivered by BA trained mental health professionals. Thus, it is speculated that BA is an effective adjunct psychosocial approach to usual comprehensive psychiatric rehabilitation for negative symptoms. Since the current study is ongoing and follow-up data will be available by the time of presentation at SIRS 2018, it will be examined whether benefits of BA would be maintained 3 months after the termination of 10-week BA treatment.

F59. VISUALIZING MENTAL REPRESENTATION OF TRUSTWORTHY FACES IN SCHIZOPHRENIA

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Background: The ability to perceive, recognize and process own and others' emotions is crucial for efficient and effective social communication. Many different tasks have been used to investigate impairments herein in patients with schizophrenia. Evidence suggests that perception, discrimination and recognition of affective facial expressions are impaired in schizophrenia patients. Importantly, not everyone may interpret the same facial expression similarly. People match their internal representation of specific facial expressions to perceived faces and variation in these internal representations may result in a distortion of social reality. The impairments in face and/or emotion processing and the bias toward a more negative experience may be causally related to degradation of the internal representation itself or to disturbances in the higher-order evaluation of visual input against functionally intact internal representations. In an attempt to develop ways of visualizing an individuals' internal representation of an emotional face on a computer screen, we set out to visualize the representation of a male and a female face.
Methods: We use a data-driven technique, i.e. reverse correlation image classification (RCIC), which makes it possible to visualize internal representations of faces on computer screens. Participants judge noisy images of faces that are created by superimposing random noise on a single constant base face. The random noise distorts the base face at the pixel level, generating facial variation across stimuli that is fully unconstrained and unaffected by researchers' a priori expectations. The participants' responses to a large number of faces are used to model the facial information that was idiosyncratically diagnostic for the judgments. This analysis yields a classification image (CI) for each participant, which visualizes the facial characteristics that drive judgments of emotional expressions (i.e., their internal representation).
We introduce an objective metric, i.e. infoVal, using gender as proof-of-principle. infoVal quantifies the probability that an observed CI was not generated by a random process and is equivalent to a modified z score. First, we test the association between infoVal and more common markers of data quality, i.e. the subjective recognizability, objective discriminability and test-retest reliability of CIs (convergent validity). Second, we use RCIC to investigate and reconstruct the mental representation of trustworthiness as expressed on the face in 32 patients with schizophrenia and 39 controls.
Results: Subjective ratings showed that male and female CIs were more strongly associated with masculinity and femininity, respectively, when infoVal scores where high ($p<.001$). Second, infoVal scores were highly correlated with test-retest reliability, i.e., higher scores corresponded with higher test-retest reliability ($p<1x10-13$).
Preliminary analyses of the RCIC task on the internal representation of trustworthy and untrustworthy faces showed that both patients and controls are capable of performing the task adequately. Data-driven multidimensional scaling of the classification images implicate 3 clusters of images, reflecting untrustworthy, neutral, and trustworthy faces. These first analyses suggest that there is no evidence for differences in internal representation of (un)trustworthy faces between patients and controls.
Discussion: We showed how infoVal scores can facilitate the interpretation of CIs. This opens the way to comprehensively investigate internal representations of emotional faces in patients with schizophrenia.

F60. INFLAMMATORY MARKERS AND COGNITIVE PERFORMANCE IN PATIENTS WITH SCHIZOPHRENIA TREATED WITH LURASIDONE

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