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Dissociation and social cognition in schizophrenia spectrum disorder

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ABSTRACT

While there is emerging evidence that dissociation is linked with trauma history and possibly symptoms in schizophrenia, it remains unclear whether dissociation represents a symptom dimensions in its own right in schizophrenia and as such is uniquely related to other features of illness. To explore this issue the current study sought to find out whether dissociation was uniquely related to an index of social cognition closely linked to social functioning, namely affect recognition. We hypothesized that dissociation would be linked with affect recognition because symptoms of dissociation may uniquely disrupt processes which are expected to be needed for correctly recognizing emotions. The sample contained 49 participants diagnosed with a schizophrenia spectrum disorder who were in a non-acute phase of disorder. Participants were concurrently administered the Bell–Lysaker Emotion Recognition Task, the Dissociative Experiences Scale, the Post Traumatic Stress Disorder Checklist and the Positive and Negative Symptoms Scale. Stepwise linear regression analyses were performed in which dissociative symptoms were forced to enter after the other symptoms in order to predict deficits in affect recognition. These analyses revealed that greater levels of dissociative symptoms predicted poorer recognition of negative emotions over and above that of positive, negative, cognitive and PTSD symptoms. Results are consistent with the possibility that dissociation represents a unique dimension o f psychopathology in schizophrenia which may be linked to function.

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1. Introduction

Generally the symptoms most often considered in schizophrenia include positive, negative and disorganization (Green and Nuechterlein, 1999). However, schizophrenia as originally described by Bleuler (1911) also involved a range of other symptoms. He, for example, described elements of the self which are intact but dissociated from one another. "Single emotionally charged ideas or drives attain a certain degree of autonomy so that the personality falls into pieces. These fragments can then exist side by side and alternately dominate the main part of the personality, the conscious part of the patient." Bleuler, thus, seems to find elements which are consistent with how the DSM-IV TR (APA, 2000) characterizes dissociation, that is, as involving problems with integrating emotions, memories and sensations into consciousness.

The study of dissociation gained momentum around the end of the 19th century, due largely to the work of Pierre Janet (1889). After much neglect, researchers again started examining dissociation, also as an element of schizophrenia, in the later part of the 20th century. Bernstein and Putnam (1986), for instance found that persons with schizophrenia report experiencing dissociation 19% more frequently than persons not suffering from schizophrenia. Others also noted high levels of dissociation among persons with schizophrenia and especially those with past experiences of trauma (Holowka, et al., 2003; Ross and Keyes, 2004; Lysaker and LaRocco, 2008). Vogel et al. (2009) found a relationship between dissociation and level of concurrent schizophrenia symptoms, but not with trauma. Schäfer et al. (in Press) found that during the acute phase of schizophrenia, positive symptoms were the strongest predictor of dissociation whilst in a post-acute phase it was childhood sexual abuse. Relatedly, Longden et al. (2012) argued that hearing voices is best understood as a form of dissociation, rather than a psychotic phenomenon.

While there is emerging evidence of a link between dissociation, trauma and possibly symptoms in schizophrenia, as well as symptoms of other disorders (Van der Hart et al., 2006; Liotti and Prunetti, 2010) it remains unclear whether dissociation represents a symptom dimensions in its own right. One piece of evidence that could point to the importance of dissociation is a unique relationship with core aspects of functioning. The detection of such a relationship may be important as it may point to the need for more careful assessments of dissociation among schizophrenia patients as well as interventions focused on this form of psychopathology.

To explore this issue the current study sought to discover whether dissociation was uniquely related to an index of social cognition

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closely linked to social functioning, namely affect recognition. Social cognition is an umbrella term that includes abilities necessary for successfully understanding social exchanges and includes the concepts: affect recognition, theory of mind, social knowledge and social rules (Couture et al., 2006). Multiple studies demonstrated that people with schizophrenia show impairments in social cognition (e.g. van 't Wout et al., 2007; Pijnenborg et al., 2007; Horan et al., 2009: Sparks et al., 2010). Deficits in social cognition are furthermore relatively stable over time in patients with schizophrenia (Lysaker et al., 2011b) and linked with deficits in social functioning in daily life (Kee et al., 2003; Pijnenborg et al., 2009; Malone et al., 2012).

We anticipated that dissociation would be related to impaired affect recognition, for several reasons. Affect recognition is the ability to interpret what emotion another person is experiencing on the basis of verbal and non-verbal cues. It requires numerous processes, of which, at least two might be disrupted in the face of dissociation. First, recognizing emotions in other people often requires the use of knowledge of one's own emotional states. Specifically persons often use their own emotional experiences for understanding those of others (Dimaggio et al., 2008; Ridout et al, 2010). As a lack of integration of one's own emotional states is a central element of dissociation (APA, 2000) persons with dissociation may lack the needed access to their own emotions in order to perceive those of others. Consistent with this is a recent study which found that poor affect recognition in schizophrenia was linked with an inability to distinguish one's own emotions and a history of sexual trauma (Lysaker et al., 2011a). A second process which helps persons recognize the emotions is metacognitive awareness of one's own bodily response to the other (Damasio, 1996). For instance, knowing that one feels afraid versus relaxed in the presence of another may be a cue regarding the emotional state of that other person. Again, a key feature of dissociation is having feelings of being out of touch with bodily experience, and as such it may be linked with poor affect recognition. Furthermore, if dissociation is indeed a result of interpersonal trauma, negative emotional expressions might naturally trigger trauma-memories leading to disruptions in swift and accurate mindreading (Liotti and Prunetti, 2010; Bateman and Fonagy, 2012).

To test the hypothesis that dissociation is linked with poorer affect recognition we administered assessments of dissociative experiences and affect recognition to adults in a non-acute phase of schizophrenia. To ensure that findings were not an artifact of other core symptoms of schizophrenia, PTSD or socially desirable responding, we also assessed positive, negative and cognitive symptoms of schizophrenia, PTSD symptoms, trauma history and the tendency to report what is viewed as socially desirable. Of note, given a range of work suggesting dissociation is a means of protecting oneself from disturbing emotions (e.g. Bowins, 2006; Oathes and Ray, 2008), we also hypothesized that dissociation would be a stronger predictor of deficits in the recognition of negative emotions as opposed to positive emotions.

2. Methods

2.1. Participants

Forty-nine participants with a confirmed DSM-IV diagnosis of schizophrenia or schizoaffective disorder as diagnosed with the Structured Clinical Interview for DSM-IV Disorders (SCID) were enrolled in the study. The participants were recruited from an outpatient psychiatry service at a Veterans Affairs Medical Center. All participants were in a post acute phase of illness as defined by having no hospitalizations or changes in medication or housing in the month before entering this study. Patients with mental retardation or active substance dependence were excluded from the study. There were 45 male and 4 female participants in the sample, their average age was 51.82 years old (sd = 9.75) and on average they had 13 years of education (sd = 2.05). The mean amount of lifetime psychiatric hospitalizations was 4.57 (se = 4.38) and the average age at the first hospitalization was 31.53 years old (sd = 13.05).

2.2. Instruments

2.2.1. The Bell–Lysaker Emotion Recognition Test

The Bell Lysaker Emotional Recognition Test (BLERT; Bell et al., 1997) uses voice and facial cues to measure emotion recognition. During the BLERT the participant watches 21 video-clips, each 10 seconds long. The participant is asked what emotion is expressed in each of these video-clips. The task measures the percentage of positive and negative emotions the participant recognizes correctly. The negative emotions are sadness, anger, fear and disgust while the positive emotions are happiness and surprise. Furthermore the task differentiates between "easy" and "hard" video-clips. This distinction is based upon the performance of a control group without schizophrenia who had more or less difficulty recognizing.

2.2.2. Dissociative Experiences Scale

The Dissociative Experiences Scale (DES, Carlson and Putnam, 1993) is a self-report tool for measuring the frequency of dissociative experiences. The DES was developed as a screening tool and contains 28 dissociative experiences that respondents may or may not have had in daily life. The respondent is asked to state how often they had each ranging from 0% to 100% of the time. The DES has three subscales: amnestic dissociation (e.g. finding new things among your belongings which you don't remember buying), experiences of depersonalization (e.g. feeling that your body doesn't belong to you) and derealization, and absorption and imaginative involvement (e.g. being in a familiar place but finding it strange and unfamiliar).

2.2.3. Marlowe–Crowne Social Desirability Scale

The Marlowe–Crowne Social Desirability Scale (MCSDS; Crowne and Marlowe, 1960) is a self-report measure which assesses the tendency of persons to report experiences in order to appear in a culturally desirable way. The MCSDS has 33 statements on which the participants have to say if it applies to themselves.

2.2.4. Post Traumatic Stress Disorder Checklist

The Post Traumatic Stress Disorder Checklist (PCL-S; Weathers et al., 1993) is a self-report of PTSD symptoms. The PCL-S contains seventeen items asking to what extent the participant experiences symptoms of PTSD. For the purposes of this study we utilized the sum of these seventeen items. This questionnaire included a list of traumatic experiences and the participants are asked whether they have ever experienced each of them. This gave a second variable, namely the sum of the traumatic experiences.

2.2.5. Positive and Negative Syndrome Scale

The Positive and Negative Syndrome Scale (PANSS; Kay et al., 1987) was used to measure positive, negative and cognitive symptoms. The PANSS is a 30 item rating scale based on chart review and a semi-structured interview. It is widely used for assessing the wide range of symptoms in schizophrenia. The PANSS has several subscales, in this study only the positive, negative and cognitive symptoms subscales are used (Lindenmayer et al., 1995). The inter-rater reliability on the PANSS subscales was between 0.90 and 0.93.

2.3. Procedure

All procedures were approved by the Roudebush Veterans Affairs Medical Center review committee and informed consents were signed by all participants. First the diagnosis of schizophrenia or schizoaffective disorder was confirmed through the SCID-1. The data was collected as part of a larger longitudinal study on work rehabilitation. The PANSS interview was taken by clinically trained research