Comparative study of alexithymia in patients with schizophrenia spectrum disorders, non-psychotic disorders and normal people

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Abstract

In the present study attempt has been made to investigate the extent of alexithymia in patients with schizophrenia spectrum disorders, non-psychotic disorders and normal people. The research sample consisted of 60 patients with schizophrenia spectrum disorders and 60 non-psychotic disorders from inpatients and outpatients of Mostafa Khomeini and Hazrat Rasoul hospitals, and 140 students from Tehran university (results of Leven test indicated the homogeneity of variance among three groups). Using Toronto Alexithymia Scale (TAS-20) they were compared.

Results showed that alexithymia had significant difference in patients with schizophrenia spectrum disorders and normal people; and non-psychotic disorders and normal people, but differences weren’t significant between patients with schizophrenia spectrum disorders and non-psychotic disorders. The difficulty in describing feelings, difficulty in identifying feelings and externally-oriented thinking were higher in patients with schizophrenia spectrum disorders than other groups. In all groups, males had more problems in describing feelings and externally-oriented thinking. These results suggest that high level of alexithymia could contribute to a greater vulnerability for schizophrenia spectrum disorders and it could set males at high risk for these disorders. Thus, it is essential to contrive a special treatment to decrease alexithymia in these patients.

Keywords: Alexithymia; regulation of emotion; schizophrenia spectrum disorders; non-psychotic disorders.

1. Introduction

The term alexithymia was coined by Sifneos (Sifneos, 1973) to characterize a difficulty in identifying and verbalizing emotions (a, absence; lexi, words; thymia, emotions, affects). This construct defines a deficit in processing and regulating emotions. People with alexithymia are characterized by an inability to identify and express emotions, difficulty in differentiating between feelings and bodily sensations that accompany emotional arousal, and a paucity of imaginary life with externally oriented rather than psychologically minded thought. Alexithymia was initially identified in individuals with so-called “psychosomatic diseases” (Nemiah, and Sifneos, ...

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1970; Todarello et al., 1995; Dirks, Robinson, and Dirks, 1981; Numata, et al. 1998; Kauhanen, et al. 1994). It has been regarded as a potential risk factor that seems to increase unhealthy behaviours (Lumley, Stettner, and Wehmer, 1996).

Dating back to Bleuler (1911/1950), psychopathologists have posited that psychoses symptoms are related to disturbed emotional processes. That emotional processes may play an important role in the development of cognitive–perceptual disturbances is consistent with the evidence that emotions play a significant role in influencing judgments, decision making, and behaviours (e.g., Clore et al., 2001; Lowenstein et al., 2001). A great deal of theorizing and research has linked elevated levels of unpleasant emotions with cognitive–perceptual disturbances, ranging from odd perceptions and beliefs to delusions and hallucinations (e.g., Bentall et al., 2001; Freeman et al., 2001) and growing body of evidence demonstrates emotion disturbances in schizophrenia spectrum disorders as schizophrenia, schizoaffective and schizotypal disorders including deficits in emotional expression, perception, and recognition (Aleman, and Kahn, 2005). Schizophrenia is typically regarded as a neurocognitive disorder with a genetic component, which suggests that emotional disturbances reflect abnormalities in brain areas important for emotion processing (Phillips, et al., 2003). Indeed, emotion abnormalities observed in schizophrenia even extend to persons at risk for schizophrenia, including relatives of patients with schizophrenia (van Rijn, et al., 2005) and other psychotic disorders. Interestingly, there appears to be some specificity in these emotion deficits. For instance, the recognition of negative emotions might be in particular deficient, and male patients seem especially worse in emotion recognition (Scholten, et al., 2005). And although the expression of emotions is impaired in schizophrenia spectrum, evidence is accumulating that the subjective emotional experience may not be reduced and that even more intense negative emotions are experienced (Myin-Germeys, Delespaul, DeVries, 2000; Aghevli, Blanchard, and Horan, 2003; Kring, et al., 1993). Moreover, levels of emotional arousal, that is, anxiety, seem to precede symptoms as hallucinations (Delespaul, DeVries, van Os, 2002).

With regard to behavioural measures of emotional processing in schizophrenia spectrum, deficits in emotion recognition have been found (Edwards et al., 2002). In addition, schizophrenic spectrum patients appear to inadequately process facial affect (Addington and Addington, 1998; Streit et al., 2001) and demonstrate a reduced left-perceptual bias in the processing of emotional chimeric faces (Gooding et al., 2001). There might also be a bias towards material with a negative emotional valence, as observed in a study in which hallucinating patients were more sensitive to negative words compared to controls (Johns et al., 2002). Moreover, another study (e.g. Hoschel and Irle, 2001) reported that negative emotional expressions yield stronger priming effects in schizophrenia spectrum patients compared to control subjects (hyperpriming).

Surprisingly, no past research has examined in a psychiatric sample whether levels of cognitive–perceptual symptoms are associated with levels of alexithymia. Based on the results of past research with schizophrenia spectrum samples, we hypothesized that greater alexithymia would be associated with higher levels of psychoses symptoms. We tested these hypotheses in acute psychiatric inpatient and outpatient samples.

2. Method

2.1. Sample

In this causal-comparative (retrospective) study, between all outpatient and hospitalized patients with schizophrenia spectrum and non-psychotic disorders (males and females) referred to psychiatric sections of Tehran city Hazrat Rasoul and Mostafa Khomeini hospitals, 60 patients with schizophrenia spectrum and 60 patients with non-psychotic were selected as research sample, also normal group consisted of 140 Tehran University different students.

2.2. Procedure

Investigators went to these hospitals, and studied cases of patients with schizophrenia spectrum disorders and other psychiatric patients. Patients who had acute and severe disease status were excluded from subject lists and the other patients were used as only those who volunteered and were willing to answer questions. Questionnaire instruction were instructed to subjects and were asked to carefully read the questions and answers them according to their characteristics. Multivariate Analysis of variance (MANOVA) Post Hoc Tukey (HSD) and Levene tests were used for analyzing of data.
2.3. Data collection instrument

Toronto Alexithymia Scale-20 (TAS-20). This is a widely used, 20-item scale that yields a global alexithymia score, as well as scores on 3 facets: Difficulty Identifying Feelings (Factor 1), Difficulty Describing Feelings (Factor 2), and Externally Oriented Thinking (Factor 3). Each item is rated on a scale of 1 (“strongly disagree”) to 5 (“strongly agree”). Higher total and facet scores indicate greater alexithymic characteristics. Psychometric properties of Toronto Alexithymia Scale-20 (TAS-20) have been approved in past researches (eg., Pandley, Mandal, Taylor, Parker, 1996; Taylor, & Bagby, 2000). Ghorbani and et al. (2002) have studied psychometric properties of this scale in Iranian and American samples and have reported high reliability and validity for it.

3. Findings

The age mean (and standard deviation) were 37/01 (and 13/31) for schizophrenia spectrum patients, 28/23 (and 7/98) for non-psychotic patients, 25/48 (and 2/18) for normal group and 28/82 (and 892) for total groups respectively. Leven test results showed that three groups had equal variances.

<table>
<thead>
<tr>
<th>variable</th>
<th>schizophrenia spectrum (1)</th>
<th>Non-psychoses (2)</th>
<th>Normal (3)</th>
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<tbody>
<tr>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>alexithymia</td>
<td>60/46</td>
<td>10/94</td>
<td>56/34</td>
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Table 1 shows that three groups of schizophrenia spectrum, non-psychotic disorders and normal persons have significant difference in alexithymia variable (F=0/28, P<0/001). More studies and Post Hoc Tukey test showed that the patients with schizophrenia spectrum disorders and normal persons (P<0/001) and patients with non-psychotic disorders and normal persons (P<0/001) had significant differences in alexithymia, but differences between schizophrenia spectrum and non-psychotic patients were not significant. Among these three groups, patients with schizophrenia spectrum disorders had highest level of alexithymia mean and patient with non-psychotic disorder had higher level of it than normal subjects.

Table 2 MANOVA test results for comparing of three groups in alexithymia subscales
Table 2 shows that three groups have significant difference in the difficulty in describing feelings (F=15/03, P<0/001), difficulty in identifying feelings (F=26/17, P<0/001) and externally-oriented thinking (F=24/28, P<0/001). These alexithymia subscales were higher in patients with schizophrenia spectrum disorders than other groups.

In all groups, Males and females had significant difference in the difficulty in describing feelings (F=13/27, P<0/001) and externally-oriented thinking (F=9/67, P=0/002), but difference is not significant in difficulty in identifying feelings. In all groups, male had more problem in describing feelings and externally-oriented thinking.

Interaction effects of three groups of schizophrenia spectrum, non-psychotic, normal subjects and two female and male sexes (2 × 3) is significant only in the difficulty describing feelings subscale (F=4/56, P<0/01). This means that when sex factor is placed alongside group factor, people have more problem in describing feelings and do not have problem in other subscales.

4. Discussion and Conclusion

Results showed that alexithymia level in patients with schizophrenia spectrum disorders is further than patients with non-psychotic disorders and normal group. Also, The difficulty in describing feelings, difficulty in identifying feelings and externally-oriented thinking levels are different among these three groups. Means that patients with schizophrenia spectrum disorders have higher levels of these three subscales of alexithymia. These findings are concordant with other findings obtained in this field (Cedro, Kokoszka, Popiel & Narkiewicz-Jodko, 2001; Edwards, Jackson & Pattison, 2002; Wout, & et al., 2007; Serper, & Berenbaum, 2008). Common etiology between alexithymia and schizophrenia spectrum disorders can explain these results. means that the same neurobiological factors affect both schizophrenia spectrum disorders and high level of alexithymia in people. Limbic system, forebrain cortex and dopamine neurotransmitter is considered in etiology of schizophrenia spectrum disorders, the same brain areas that also play a vital role in alexithymia.

Also this study showed that males and females have significant difference in alexithymia. In all groups of patients with schizophrenia spectrum, non-psychotic and normal, males had high level of alexithymia than females. This finding are concordant with other findings obtained in this field ( Salminen, Saarijarvi, Aarela, Toikka, Kauhanen, 1999; Lane, Sechrest, Riedel, 1998; Vorst, Bermond, 2001).

Because men verbally are weaker than women, so they naturally have more difficulties in describing feelings, on the other hand, women being more emotional than men, therefore they easily can experience and recognize their emotions and transfer them others. In according to this logic, the findings of previous researches and present research are understandable. Also another achievement of this study in regard to being significant of interactive effects of gender × group in the difficulty in describing feeling component be explained based on this logic. This means that when gender factor stand beside group factor three groups of patients with schizophrenia spectrum disorders, non-psychotic disorders and normal subjects suffer from describing feeling problems.
These results suggest that high level of alexithymia could contribute to a greater vulnerability for schizophrenia spectrum disorders and it could set males at high risk for this disorders. thus, it is essential to contrive a special treatment to decrease alexithymia in these patients.

although we hypothesize that alexithymia can contribute to the development of schizophrenia spectrum disorders (especially the latter), we must acknowledge that this is speculation on our part given that our research is causal-comparative in nature. It is also quite plausible that the formation of schizophrenia spectrum disorders contribute to changes in alexithymia. It will be important for future research to test these alternative possibilities by examining alexithymia and schizophrenia spectrum disorders longitudinally. In terms of clinical implications, the present results clearly suggest that examination of alexithymia variables have important implications for the etiology and treatment of schizophrenia spectrum disorders.

Reference


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