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Letter to the Editor

Oxytocin and empathy to pain in schizophrenia

The findings of Abu-Akel *et al*. (2014) were of considerable interest to us. We have proposed that in-group–out-group dynamics have aetiological significance in schizophrenia. We hypothesized that a sensitivity or intolerance towards out-group members resulting from an interaction between social environmental factors (abundance of out-group members in the social environment or paucity of contact with kin/in-group members or a combination of both) and individual characteristics (difficulty in re-assigning out-group individuals as in-group members or having a high threshold for designating individuals as in-group) results in dysregulation and aberrant connectivity in critical brain centres, leading to schizophrenia (Abed & Abbas, 2011, 2014).

Specifically, we were interested in their finding that schizophrenic patients responded differently in response to oxytocin (OT) towards in-group and out-group members, with patients showing no increased empathy in the painful out-group condition in contrast to controls where increased empathy in this condition was observed. This is consistent with the prediction of our 'out-group intolerance hypothesis' (OIH) where we suggested that schizophrenic patients would be less tolerant to out-group members than controls. Also, OT increased the level of empathy in healthy participants towards out-group members in the non-pain condition but had the opposite effect in the patient group. The administration of OT resulting in in-group bias in the patient group and out-group bias in the healthy controls is also supportive of our contention that the difficulty in schizophrenia patients may lie in their inability to re-designate out-group individuals as in-group members. In addition, the fact that in the healthy controls there was an increase in pain ratings in both the painful and non-painful stimuli in the OT condition with an increase in empathic response towards the out-group members similarly offers further support to the OIH.

In summary, the major finding of the study, namely that OT induced an empathic bias towards out-group members in healthy male controls but not in male schizophrenic patients, provides the first direct supportive evidence of the OIH.

Although OT failed to 'normalize' the response towards out-group individuals (especially the conflictual out-group) we have suggested that such a normalization may be feasible if patients were treated with OT at an early stage of their illness before the neuropathological changes have reached an advanced stage (Abed & Abbas, 2014). We hypothesized that treating the illness (with OT) at an early stage or treating 'ultra-high-risk' patients in the prodromal phase may offer a preventative strategy through 'resetting the threshold' for designating others within the social environment as in-group, thus rectifying what we consider to be the core psychopathological process that leads to the fully fledged syndrome of schizophrenia.

Declaration of Interest

None.

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