

SUMMARY

Conscious awareness is related to brain activities represented as unitary, integrated and changeable processes reflecting binding of diverse modalities of basic neural informational processes and their subjective components. According to recent research disturbances of self-awareness and conscious experience have a critical role in pathophysiology of schizophrenia, which in early stages of the disease mainly include overactivation of the HPA axis. Together these studies suggest that the processes of disrupted awareness and conscious disintegration in schizophrenia likely might be related and represented by similar disruptions on the brain level, which in principle could be explained by various levels of disturbed connectivity and information disintegration that may negatively affect usual patterns of synchronous activity constituting adaptive integrative functions of consciousness. In this context, a purpose of the theoretical part of the dissertation is to describe basic neurobiological mechanisms underlying integrative processes in the brain with its complementarily related mental activities including self-awareness and insight reflecting interrelated processes between mind and brain that implicate direct effect of psychotherapy and other metacognitive activities on the brain.

The first part of empirical research included in this study was focused on cognitive disorganization and its critical role in the pathophysiology of schizophrenia. Recent findings indicate that first episode psychotic disorders are closely linked to stressful events which might be related to “kindling-like” sensitization and specific neuroendocrine changes. In this context, we have examined relationships between symptoms of disorganisation in adult young women with first episode psychosis, dissociative and somatoform symptoms and other stress related symptoms including hair cortisol.

Methods: In the clinical study 50 inpatients, adult young women with first episode psychosis, were assessed for disorganization symptoms and other positive and negative symptoms of schizophrenia (PANSS), stress symptoms and dissociation (TSC-40, DES, SDQ-20), complex partial seizure-like symptoms (CPSI), depressive and anxiety symptoms (BDI-II, SAS) and hair cortisol.

Results: The data indicate that in the patients with first episode psychosis disorganization symptoms manifest significant negative correlation with anxiety, dissociation, complex partial seizure-like symptoms and hair cortisol levels.

Conclusion: These results suggest that the patients with the first episode psychosis might be according to their clinical symptoms divided into two subgroups, the first with high levels of disorganization symptoms and the second with high levels of dissociative and complex partial seizure-like symptoms which might have serious clinical implications for treatment of psychotic disorders.

In the second part of the empirical research we have followed and developed recent research studies that disturbances of self-awareness and conscious experience related to stressful experiences may have a critical role in pathophysiology of schizophrenia which in early stages of the disease mainly include overactivation of the HPA axis. We have assessed relationships of insight and hair cortisol levels in young women at the beginning of their first psychotic episode.

Methods: In the clinical study 45 inpatients, adult young women with first episode psychosis, were assessed for schizophrenia psychopathology symptoms (PANSS), experience of insight (BCIS), depressive and anxiety symptoms (BDI-II, SAS) and hair cortisol.

Results: Results show that positive symptoms measured by PANSS are negatively associated with insight composite index. The process of insight represented by self-reflection also manifests significant positive correlation to hair cortisol levels.

Conclusion: Results of this study report novel findings suggesting that increased hair cortisol levels are positively associated with self-reflective experiences in the first psychotic episodes. This result is in agreement with findings that the process of self-reflection may lead to anticipatory stress which may be reflected by increased cortisol. This finding is in agreement with evidence that positive coping (eustress) is related to anticipatory cortisol responses which suggest that manageable stress experiences may positively influence psychobiological resilience.