World Journal of Psychiatry

Online Submissions: http://www.wjgnet.com/esps/
bpgoffice@wjgnet.com
doi:10.5498/wjp.v3.i3.50

World J Psychiatr 2013 September 22; 3(3): 50-56
ISSN 2220-3206 (online)

EDITORIAL

Differential diagnosis of obsessive-compulsive symptoms from delusions in schizophrenia: A phenomenological approach

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Received: April 17, 2013 Revised: May 31, 2013
Accepted: June 8, 2013
Published online: September 22, 2013

Abstract

Several studies suggest increased prevalence-rates of obsessive-compulsive symptoms (OCS) and even of obsessive-compulsive disorder (OCD) in patients with schizophrenic disorders. Moreover, it has been recently proposed the existence of a distinct diagnostic subgroup of schizo-obsessive disorder. However, the further investigation of the OCS or OCD-schizophrenia diagnostic comorbidity presupposes the accurate clinical differential diagnosis of obsessions and compulsions from delusions and repetitive delusional behaviours, respectively. In turn, this could be facilitated by a careful comparative examination of the phenomenological features of typical obsessions/compulsions and delusions/repetitive delusional behaviours, respectively. This was precisely the primary aim of the present investigation. Our examination included seven features of obsessions/delusions (source of origin and sense of ownership of the thought, conviction, consistency with one's belief-system, awareness of its inaccuracy, awareness of its symptomatic nature, resistance, and emotional impact) and five features of repetitive behaviours (aim of repetitive behaviours, awareness of their inappropriateness, awareness of their symptomatic nature, and their immediate effect on underlying thought, and their emotional impact). Several of these clinical features, if properly and empathically investigated, can help discriminate obsessions and compulsive rituals from delusions and delusional repetitive behaviours, respectively, in patients with schizophrenic disorders. We comment on the results of our examination as well as on those of another recent similar investigation. Moreover, we also address several still controversial issues, such as the nature of insight, the diagnostic status of poor insight in OCD, the conceptualization and differential diagnosis of compulsions from other categories of repetitive behaviours, as well as the diagnostic weight assigned to compulsions in contemporary psychiatric diagnostic systems. We stress the importance of the feature of mental reflexivity for understanding the nature of insight and the ambiguous diagnostic status of poor insight in OCD which may be either a marker of the chronicity of obsessions, or a marker of their delusionality. Furthermore, we criticize two major shortcomings of contemporary psychiatric diagnostic systems (DSM-IV, DSM-V, ICD-10) in their criteria or guidelines for the diagnosis of OCD or OCS: first, the diagnostic parity between obsessions and compulsions and, second, the inadequate conceptualization of compulsions. We argue that these shortcomings might artificially inflate the clinical prevalence of OC symptoms in the course of schizophrenic disorders. Still, contrary to a recent proposal, we do not exclude on purely a priori grounds the possibility of a concurrence of genuine obsessions along with delu-

sions in patients with schizophrenia.

Key words: Schizophrenia; Obsessive-compulsive symptoms; Obsessions; Compulsions; Delusions; Clinical features; Phenomenological approach; Differential diagnosis

Core tip: Obsessive-compulsive symptoms are commonly diagnosed in patients with schizophrenia and a distinct diagnostic sub-group of schizo-obsessive schizophrenia has been proposed. However, further research presupposes the accurate differential diagnosis of obsessions from delusions and of compulsions from repetitive behaviours motivated by delusions. We provide here a comparative examination of twelve clinical features of typical obsessions and delusions and, correlatively, of compulsions and delusional repetitive behaviours. We also discuss several still open or controversial issues, such as the nature of insight, the diagnostic status of poor insight into obsessions, the conceptualization of compulsions, as well as the diagnostic weight accorded to them.

Oulis P, Konstantakopoulos G, Lykouras L, Michalopoulou PG. Differential diagnosis of obsessive-compulsive symptoms from delusions in schizophrenia: A phenomenological approach. *World J Psychiatr* 2013; 3(3): 50-56 Available from: URL: http://www.wjgnet.com/2220-3206/full/v3/i3/50.htm DOI: http://dx.doi.org/10.5498/wjp.v3.i3.50

INTRODUCTION

Obsessive-compulsive disorder (OCD) or obsessive-compulsive symptoms (OCS) are commonly diagnosed in patients with schizophrenic disorders, with weighted average rates of 12.6% and 25%, respectively (see for recent reviews[1,2]). These high prevalence-rates contrast with the much lower rates reported in the past, when, under the dominant influence of Freudian psychoanalysis, OCS or even OCD were considered as clinical expressions of defence mechanisms against psychosis. In turn, contemporary epidemiological findings led to a wealth of studies investigating the etiological, clinical and therapeutic significance of obsessive-compulsive symptoms in schizophrenia. In a recent review of these studies, Poyurovsky and co-workers formulated explicit diagnostic criteria for a distinct clinical sub-group of schizophrenia, namely "schizo-obsessive" psychotic disorder[3]. However, they acknowledged that "the definition of obsessions and compulsions in the nosological context of schizophrenia and the differential diagnosis distinguishing these symptoms from delusions and delusionally motivated behaviours are essential for the study of schizo-obsessive schizophrenia"[3]. Accordingly, our aim in this paper is to examine in a comparative manner the relevant clinical phenomenological features involved in the differential diagnosis between obsessions and delusions, as well as between compulsions driven by obsessions and repetitive behaviours driven by delusions in patients with schizophrenic disorders. Moreover, we also deal with the related issues of the nature of insight, the diagnostic status of poor insight, the conceptualization of compulsions and the diagnostic weight accorded to them in current psychiatric diagnostic systems. Finally, we stress the relevance of these issues to the investigation of OCS symptoms in the course of schizophrenia.

CLINICAL FEATURES OF OBSESSIONS/COMPULSIONS VERSUS DELUSIONS/DELUSIONAL BEHAVIOURS

According to the canonical definition provided in the DSM-IV, delusions are false beliefs based on incorrect inference about external reality that are firmly sustained despite what almost everyone else believes and despite what constitutes incontrovertible evidence to the contrary. Likewise, obsessions are defined as recurrent and persistent thoughts, impulses or images that are experienced as intrusive and inappropriate and that cause marked anxiety or distress[4]. These definitions imply a major difference between delusions and obsessions. On the one hand, delusions are beliefs, *i.e.*, thoughts which patients entertain and to which they give their full assent as being true. On the other hand, obsessions are thoughts, images or impulses invading patients' consciousness, without however being believed by them as true. In other words, obsessions are not, at least typically, beliefs. To be sure, patients' attitude of pathological doubt towards their obsessions renders them apprehensive and makes them behave as if the content of their obsessions might come true. Thus, obsessions of contamination lead to compulsive rituals of hand-washing, and obsessions of doubt lead to compulsive checking rituals. However, patients' insight into the excessiveness and unreasonableness of their obsessions is typically preserved.

Moreover, the definition of delusions implies that delusional beliefs are recognized by psychotic patients as products of their own mental activity, *i.e.*, as self-generated and self-owned beliefs or inferences, with the sole exception of delusions of inserted thoughts into their minds by alien agents. Likewise, the definition of obsessions states that they are invariably recognized by patients as products of their own mental activity. Thus, the features of source of origin and self-ownership fail to discriminate delusions from obsessions. Furthermore, the definition of delusions implies that, at least at the height of a psychotic episode, they are invariably held with firm conviction about their accuracy. Patients consider their delusions as fully reasonable to entertain and even as self-evident. As a result, they see no reason to entertain doubts about their validity, let alone to oppose or resist them. This holds even for delusions of thought-insertion and, more generally, for delusional explanations of other

primary psychotic experiences such as hallucinations. By contrast, obsessions, as intrusive thoughts, images or impulses, are experienced as excessive, unreasonable and thus distressful. The features of intrusiveness, inappropriateness and distress of obsessions, jointly, constitute their "ego-dystonicity". Whereas patients conceive of their delusions as totally justified true beliefs, their obsessive counterparts realize immediately that their obsessive thoughts, images or impulses are excessive and rationally unwarranted.

Delusional beliefs are typically integrated into patients' total belief-system. This integration may require the revision of some of their remaining beliefs in order to preserve their systemic coherence. Moreover, delusions are expressed in patients' attitudes and possibly their manifest behaviour as well. For example, patients become suspicious towards their presumed persecutors, or, alternatively, they may try to avoid or challenge them. However, patients may not express their delusions in their overt behaviour as attested by the well-known phenomenon of "double book-keeping". Be that as it may, patients experiencing typical obsessions try to drive them out from their consciousness, albeit unsuccessfully. Delusions of the most common thematic content, namely delusions of persecution, are also accompanied by anxiety and distress. However, deluded patients' distress stems from their firm conviction that they are mortally threatened by their persecutors, against which they have to defend themselves. Their persecutory delusions are never questioned or resisted against. By contrast, patients with obsessions experience great distress and anxiety, owing to their "ego-dystonicity" and the failed efforts to repress them. The primarily internal source of anxiety and distress in obsessions contrasts with the merely external source of anxiety and distress that delusions might bring about. At any rate, the mere experience of distress fails to discriminate obsessions from delusions. Only the precise identification of its internal or external source of origin can help in this respect[5].

Compulsions, according to the DSM-IV-TR[4], are defined as repetitive behaviours or mental acts that the patient feels driven to perform in response to an obsession or according to rules that must be applied rigidly. It is often clinically difficult, especially in chronic OCD or OCS, to trace patients' compulsions to underlying obsessions. Patients report that they perform their compulsive rituals because they "inexplicably feel" that they "have to". In such cases, an accurate history of the initial stage of patients' symptoms is mandatory. Compulsions aim at neutralizing intrusive thoughts, mental images or feared impulses, which are invariably experienced as unwanted and anxiety-generating. Delusions also may lead to the performance of repetitive acts. For example, a patient with the bizarre delusion that the world will end soon unless he/she repeatedly washes his/her hands, engages in this repetitive behaviour, or, another patient with delusions of persecution may check repeatedly whether her persecutors are after him/her. Thus, repetitive delusional behaviours in patients with schizophrenia originate from their delusional beliefs and are congruent with them. Compulsions are behaviours recognized as lacking rational justification, whereas repetitive delusional behaviours are deemed fully justified. The recognized irrationality of compulsions may even generate further distress and anxiety. By contrast, repetitive delusional behaviours, by themselves, do not increase distress or anxiety. Compulsions make obsessive thoughts temporarily less intrusive and thus reduce somewhat patients' internally generated distress. By contrast, lacking the feature of intrusiveness, repetitive delusional behaviours exhibited by patients with schizophrenia do not affect patients' possible concomitant anxiety or distress. Table 1 summarizes the previous contrasts.

COMMENTARY

We provided in the foregoing a comparative examination of the major clinical phenomenological features involved in the differential diagnosis of obsessions and compulsions from delusions and repetitive delusional behaviours, respectively. This comparative examination could facilitate the differential diagnosis of obsessions from delusions in the course of schizophrenia. Both obsessions and delusions are typically recognized as originating in patients' own mind, with the exception of inserted or made-thoughts. However, typical delusions are firmly held beliefs, usually integrated into patients' overall belief system. As a result, they are never resisted against and are not experienced as distressful. By contrast, typical obsessions are unwanted excessive and unreasonable thoughts, images or impulses, experienced as distressful. As a result, obsessions are promptly resisted against and the failed attempts to resist them generate further distress and anxiety. Furthermore, compulsive rituals aim to neutralize patients' underlying obsessions, by contrast to repetitive delusional behaviours which lack completely this feature. These differences are also reflected in patients' differential appraisal of the appropriateness of their repetitive behaviours, as well as in the differential impact of the latter on patients' beliefs and emotional state.

The foregoing considerations are consistent with those of another recent comparative investigation, whereby the clinical features of lower levels of conviction and fixity and greater levels of fluctuation, resistance and insight were proposed as discriminating obsessions from delusions[6]. More precisely, the authors of this study distinguished the following six features of abnormal beliefs: (1) conviction: degree to which the person is convinced that his/her belief is true; (2) fixity: un-corrigibility or stability of the belief when the person is presented with recalcitrant evidence; (3) fluctuation: spontaneous changes in the level of conviction, that is, when the person is not being presented with evidence contrary to his/her belief; (4) resistance: the effort the person makes to reject his/her belief; (5) awareness of the inaccuracy of belief: the degree to which the person is aware that his/her belief is

Table 1 Clinical features of obsessions/compulsions versus delusions/delusional repetitive behaviours

Clinical features	Obsessions/compulsions	Delusions/delusional repetitive behaviours
Source of origin and sense of ownership of the thought(s)	Internal origin, assumed ownership	Internal origin, assumed ownership (with the exception of passivity-experiences of thought-insertion)
Conviction	Absent, though patient fears that they might come true	Absolute
Consistency with one's belief-system	Inconsistent	Integrated into patients' belief-system
Awareness of inaccuracy	Recognized as excessive and unreasonable to hold	Recognized as totally justified or even as self-evident
Awareness of their symptomatic nature	Very strong or at least medium strong	Virtually absent
Resistance	Very strong though unsuccessful	None
Emotional impact	Experience of marked distress/anxiety as a joint effect of obsessions' intrusiveness, doubts that their contents may come true along with the failure to resist them successfully	Possible experience of distress and anxiety as an effect of one's conviction about incurred imminent dangers
Aim of repetitive behaviours	Temporary neutralization of intrusive thoughts, images or impulses	Harmonization of behaviour with delusional beliefs
Awareness of their inappropriateness	Recognized as inappropriate, excessive and unreasonable	Recognized as appropriate and even reasonable, given their motivating delusional beliefs
Awareness of their symptomatic nature	Strong	Virtually absent
Immediate effect of repetitive behaviours on thoughts	Behaviours make thoughts temporarily less intrusive	Behaviours per se do not affect underlying delusional beliefs
Emotional impact of repetitive behaviours	Temporarily distress-reducing, but eventually sources of further distress/anxiety	Behaviours per se do not affect level of distress or anxiety

inaccurate, unreasonable and/or senseless; and (6) ability to attribute the belief to an illness: the extent to which the person is able to acknowledge that his/her belief is due to OCD[6].

Strictly speaking, these features apply only to delusions, since obsessions are not beliefs. Thus, their application to obsessions requires the substitution of "thoughts, images or impulses" for "beliefs": the features of conviction, fixity and fluctuation which qualify only beliefs cannot apply to obsessions. Instead of conviction, the distinguishing feature of obsessions is patients' pathological doubt that the content of their thoughts, images or impulses might come true, however with preserved insight into the excessiveness of their doubts. Besides, the same excessive doubt and even disbelief may also attach to the "correct" execution of their compulsive rituals. As a result, patients may not "believe their eyes" that their cleaning or checking rituals have been effectively completed.

DIAGNOSTIC SIGNIFICANCE AND NATURE OF INSIGHT

According to the DSM-IV-TR diagnostic criteria of OCD[4], the recognition that the obsessions or compulsions are excessive or unreasonable is by definition one of the distinguishing features of the disorder. However, DSM-IV-TR acknowledges also that insight into the unreasonableness of the obsessions or compulsions can vary from good to poor in the course of the disorder. Accordingly, a diagnostic specifier of OCD with good versus poor insight has been provided. The "poor insight" specifier introduces a dimensional approach to obsessions. This approach posits a continuum between obsessions and delusions and has been adopted by several authors[7-9]. The continuum in question ranges from typical obsessions, through overvalued ideas, to typical delusions. However, the concept of overvalued ideas remains still imprecise. According to DSM-IV-TR, overvalued ideas are abnormal beliefs not held with clearly delusional conviction, but not ego-dystonic either[4]. Thus, overvalued ideas lack any positive characterization. This is the main reason why we have avoided the use of this concept in our comparative examination. At any rate, overvalued ideas, as beliefs, are much closer to delusions than to obsessions. This is not to deny that the features of conviction and ego-dystonicity may come in degrees. Typically, the strength of delusional conviction diminishes in the course of appropriate biological or psychological successful treatments. Moreover, according to DSM-IV-TR, OCD patients with preserved insight ("good insight") attempt initially to ignore or suppress their obsessions. This attempt usually results in mounting anxiety or distress, which patients try to reduce by compulsive rituals. However, in the course of OCD, after repeated failures to resist obsessions and/or compulsions, patients may give up any resistance to them. As a result, obsessions and/or compulsions are then incorporated into patients' daily routine[4]. We consider this feature as a marker of OCD chronicity. Moreover, the feature of lack of resistance to OCS has to be clearly distinguished from the feature of poor insight. Although poor insight may be also a marker of chronicity, whenever lacking from the very beginning of the illness, this feature should be considered as a strong diagnostic marker of delusionality.

A particularly valuable analysis of the precise nature of insight in OCD has been proposed by Jaspers[10] in

his classic textbook "General Psychopathology". Jaspers' analysis has been recently applied by German psychopathologist Bürgy[11,12] to the problem of the differential diagnosis of obsessions from delusions. Following Jaspers, Bürgy stressed the feature of reflexivity as the distinguishing feature of pure obsessions or "obsessions in the strict sense" from delusions and claimed that "obsessions in the strict sense" are impossible in the course of schizophrenia. More precisely, Bürgy[11,12] argued that normal mental life is in principle reflective, in the sense that human subjects normally have the capacity to reflect on the experiential contents of their own consciousness (their thoughts, feelings, memories, volitions, motivations *etc*.). This capacity is fully preserved in patients with "pure" obsessions or obsessions "in the strict sense": patients are aware of the intrusion of their obsessive thoughts, images or impulses into their consciousness. Thus, they experience a conflict between the content of their consciousness and its recognition as excessive and unreasonable in their reflective self-consciousness. Moreover, this conflict between patients' "first order" obsessive thoughts, images or impulses and their "second order" assessment of them as "crazy" is the primary source of patients' experienced anxiety and distress. This anxiety is even independent from the anxiety generated by the specific content of patients' obsessions, *e.g.*, their fear of contamination by microbes. By contrast, the formation of delusional beliefs implies the, at least temporary, abolition of the capacity of critical reflection on the contents of one's consciousness: patients entertain firmly their delusional beliefs without any awareness or critical reflection on their possible irrationality. To be sure, delusions of persecution may be also a source of anxiety and distress, however secondary to the perceived threats emanating from patients' presumed persecutors. Thus, whereas "obsessions in the strict sense", whenever experienced, are simultaneously evaluated as nonsensical, such evaluation of delusional experiences becomes possible, if at all, only retrospectively, after their (spontaneous or treatment-induced) remission. The preservation of the feature of reflexivity captures the core aspect of "insight", that is, the awareness of having abnormal mental experiences or even symptoms of mental illness. By the same token, this capacity for mental reflexivity underlies normal "reality testing" the loss of which is the hallmark of psychotic disorders.

The same author has argued that obsessions in the "strict sense" - as defined by the reflective experience of their senselessness - are specific to obsessive-compulsive disorder and, as such, cannot occur in the course of schizophrenia[11,12]. The rationale of this radical thesis seems to be that the principle of mental reflexivity cannot simultaneously operate selectively on some contents (obsessions) of patients' consciousness, but not on others (delusions). To be sure, several cases of prima-facie obsessions in patients with schizophrenia may prove delusional. Perhaps the smooth transition from obsessions to delusions is impossible, although this is still in need of clinical corroboration. However, this does not exclude a priori the possibility of a sudden transformation of obsessions into delusions. At least one study suggests the real possibility of a reversible transition from obsessions to delusions[7]. Moreover, as already mentioned, numerous studies reported consistently elevated rates of OCS or even OCD in the course of schizophrenic disorders[1,2]. The crucial issue here is whether "obsessions in the strict sense" occur in schizophrenic patients only when in full remission from their delusions or also concurrently with them. If the former were the case, Bürgy's claim would be vindicated. By contrast, if active delusions were entertained along with the experience of genuine obsessions Bürgy's account would have to be revised. At any rate, only carefully designed clinical studies probing simultaneously patients' levels of insight in both psychotic and OC symptoms could help address conclusively this issue. In the meantime, clinical experience suggests that obsessions may co-exist along with active delusions. After all, the principle of reflexivity is still operative in psychotic patients on the non-psychotic contents of their consciousness. Accordingly, the a priori exclusion of the very possibility of co-existence of obsessions in the strict sense along with delusions in patients with schizophrenic disorders seems clearly exaggerated. Relatedly, treatment of schizophrenia with atypical antipsychotics has been associated with the de novo formation of OCS[13]. However, with the possible exception of clozapine, this association might also be attributed to illness characteristics[14].

ON THE DIAGNOSTIC WEIGHT AND CONCEPTUALIZATION OF COMPULSIONS

A further major complication for the differential diagnosis of OC symptoms in the course of schizophrenia, also stressed by Bürgy[11,12], is the diagnostic parity accorded to obsessions and compulsions for the diagnosis of OCD or OCS in the diagnostic criteria and diagnostic guidelines of DSM-IV and ICD-10, respectively[4,15]. This diagnostic parity of obsessions and compulsions is also maintained in the new revision of the DSM, namely DSM-V (dsm5.org, Updated May 1, 2012, accessed November 6, 2012). The relevant passage in Criterion A reads thus: "Presence of obsessions, compulsions or both". Thus, OCD may be diagnosed in patients with compulsions only, without obsessions. However, this contradicts DSM-IV claim that compulsions are motivated by underlying obsessions. Furthermore, compulsions can remain un-manifested in patients' overt behaviour. These are the well-known covert compulsions whereby patients are engaged in further repetitive mental activities, such as, *e.g.*, counting or praying, in order to neutralize their primary obsessions. However, without underlying obsessions, the diagnosis of repetitive behaviours as compulsive is unwarranted: repetitive

behavioural patterns *per se* are diagnostically non-specific, since they may occur in various and quite heterogeneous psychopathological conditions, such as tics, stereotypic movements, delusions, command hallucinations, passivity experiences or even impulses in the context of impulse-control disorders. In other words, whereas obsessions without compulsions, though unlikely, are possible, the reverse does not hold. Moreover, recent clinical research-findings suggest that OCD patients display both obsessions and compulsions[16]. Thus, for both conceptual and empirical reasons, the diagnosis of OCS in OCD and in the course of schizophrenic disorders should require the presence of both obsessions and compulsions, at least at the time of their initial manifestation.

To be sure, the full definition of compulsions in the DSM-IV-TR[4] runs thus: repetitive behaviours or mental acts that the patient feels driven to perform in response to an obsession or according to rules that must be applied rigidly. However, the expression "according to rules that must be applied rigidly" is ambiguous: it might denote either deeply entrenched personal or cultural habits without pathological significance, or repetitive behaviours in response to an obsession. In the first sense it would be dispensable, whereas in the second sense it would be redundant.

Overall, the current diagnostic parity of obsessions and compulsions and the inadequate conceptualization of the nature and differential diagnosis of compulsions might inflate artificially the diagnosis of OCD or OCS in the course of schizophrenia. Indeed, virtually all available studies investigating OCD or OCS in the course of schizophrenia have been carried out according to the DSM-diagnostic criteria[1,2]. However, DSM-IV criteria, even when applied through the Structured Clinical Interview for DSM-IV diagnoses[17], might still misdiagnose as compulsions merely compulsive-like repetitive behaviours in schizophrenia. This misdiagnosis, along with the diagnostic parity between obsessions and compulsions in DSM-IV, would then allow the additional diagnosis of comorbid OCD or OCS. Several of these studies have also used concurrently the Yale-Brown Obsessive Compulsive Scale (YBOCS). However, the YBOCS has been designed for the assessment of OCD or OCS severity, not for their diagnosis[18]. Therefore, we concur with the proposal of Bürgy[11,12] that future revisions of the psychiatric diagnostic systems, should consecrate the diagnostic primacy of obsessions "in the strict sense" over compulsions along with the provision of a more strict conceptualization of the latter. However, contrary to him, we do not deny the real possibility of coexistence of genuine OCS and delusions in the course of schizophrenia.

Finally, we have also stressed that clinicians should take seriously into account the duration of OC symptoms in their clinical assessment of the features of poor insight and lack of resistance, in order to discriminate chronic obsessions and compulsions from delusions and repetitive delusional behaviours, respectively.

LIMITATIONS

The major limitation of our paper consists in its exclusively descriptive-phenomenological approach. Thus, we have not taken into account findings from clinical, neurobiological or pharmacological studies of potential relevance to the investigation of OCS or OCD in patients with schizophrenia. For instance, a meta-analysis of 18 clinical studies showed that the presence of OCS in patients with schizophrenia, though not of OCD, was significantly associated with greater severity of global psychotic symptoms, positive psychotic symptoms and negative psychotic symptoms[19]. Moreover, in schizo-obsessive patients, it has been found that OC symptoms emerge earlier than schizophrenic symptoms[20]. Furthermore, differential activation of brain networks underlies the clinical symptomatology of OCD and schizophrenia. More precisely, increased functional activity of the orbito-frontal cortex and the right dorso-lateral prefrontal cortex, along with decreased activity of the right anterior cingulate cortex and the insula have been reported in drug-naive OCD patients[21], as well as abnormally heightened functional connectivity of ventro-limbic cortico-striatal regions[22]. By contrast, reduced frontocingulate and frontoparietal and increased frontotemporal and frontostriatal functional connectivity have been reported consistently in schizophrenia[23].

CONCLUSION

Although preliminary, the results of our phenomenological approach suggest that the comparative assessment of major features of obsessions versus delusions, as well as of compulsions versus delusional repetitive behaviours could facilitate their accurate differential diagnosis in patients with schizophrenic disorders. In turn, this would provide a more solid ground for the investigation of their epidemiology and aetiology, as well as their clinical, prognostic and therapeutic import. Moreover, we have also discussed several conceptual and clinical diagnostic issues that remain still controversial: the nature of insight, the diagnostic status of poor-insight, as well as the conceptualization, differential diagnosis and the diagnostic weight of compulsions. Better conceptually informed future empirical studies in order to address these controversial or open issues are thus fully warranted.

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