ISSN 2692-5877
DOI: 10.46998/IJCMCR.2023.24.000599

International Journal of
Clinical Studies & Medical Case Reports

Review Article

Delusional Disorder: A Comprehensive Narrative Review

Nagesh Pai and Shae-Leigh Vella*
Department of Medicine, University of Wollongong, NSW, Australia

***Corresponding author:** Shae-Leigh Vella, Department of Medicine, University of Wollongong, NSW, Australia

Received: February 01, 2023 **Published:** March 20, 2023

Abstract

Delusional disorder is an uncommon, but not rare disorder that stems from Kraepelin's early conception of paranoia. Delusional disorder remains under researched and consequentially poorly understood. All aspects of delusional disorder remain under studied and have inconsistent results. Therefore, this narrative review provides a comprehensive synthesis of research pertaining to delusional disorder. Specifically, the nosology and diagnosis of delusional disorder, the epidemiology of delusional disorder, the aetiology of delusional disorder, the symptomology of delusional disorder as well as the course and outcomes of delusional disorder. It is evident that across all areas there are inconsistencies and discrepancies in the findings, with the current diagnostic criteria not incorporating symptoms that are often experienced in patients. Further there are no evidenced based treatment for delusional disorder and findings in this area are also inconsistent. This paper highlights the areas where further research is required in order to clarify the inconsistent results and inform prevention and treatment.

Introduction

The modern diagnosis of Delusional Disorder (DD) stems from the early concept of paranoia which was central to psychiatry in the nineteenth century and early twentieth century [1]. Kraepelin described paranoia as a disorder characterised by chronic non-bizarre delusions that does not evolve to the more severe dementia praecox; the early conceptualisation of schizophrenia [2,3]. Since Kraepelin, the symptomology and classification of DD have been debated [4,5]. However, despite the historical prominence of DD and the clinical relevance; DD remains under researched [4,5]. Roudsari, Chun and Manschreck [6] ascertained that DD is inadequately understood in all areas, specifically; the aetiology, symptomology, prevalence, associated comorbidities, course, treatment and outcome.

Therefore, this article aims to provide a narrative review of previous research pertaining to DD. Specifically, this article will review the nosology of DD, epidemiology of DD, aetiology of DD, symptomology of DD, the course of DD as well as the prognosis and outcomes of patients with DD. This review aims to both synthesize existing literature in the area pertaining to each of the aforementioned topics as well as highlighting the need for renewed focus on DD and further research.

Delusional Disorder Diagnostic Criteria

The nosology of DD has remained contentious with the diagnostic criteria of DD is still founded in Kraepelin's conception of paranoia which is marked by a lack of cognitive deterioration [7]. Further it has been suggested that DD is simply paranoid schizophrenia [8]. Thus, Marneros and colleagues [8] investigated this claim and found that DD is not paranoid schizophrenia as there were significant differences evident between the disorders, the authors concluded that DD is a separate entity and is not commonly the prodrome of schizophrenia.

A delusion is defined as a fixed false belief that is based upon the inaccurate interpretation of reality despite evidence to the contrary [9]. DD is diagnosed when an individual has one or more non-bizarre delusional thoughts, that are based on situations that are not real but equally they are not impossible [9]. A recent study assessing five different diagnostic criteria of DD found that the DSM 5 was the most inclusive system [10]. The DSM-5 diagnostic criteria define DD as the presence of delusions for at least one month that cannot be explained by another condition [11]. However, the DSM 5 does not specify that the content of the delusions need to be non-bizarre [11,12]. Though the individual is suffering from delusions; their behaviour is not bizarre, and they can still function relatively 'normally'.

Individuals with DD can display factual insight in that they are capable of understanding that others believe their beliefs to be unreasonable, however, they are unable to accept themselves, that their beliefs are unreasonable [11]. It is crucial that the individuals' cultural and religious background are considered when diagnosing DD [11]. The global functioning of those with DD is generally better than the global functioning of people with schizophrenia. Thus, lower functional impairment is apparent than what is apparent in relation to other psychotic disorders. Individuals with DD tend to have a 'normal' appearance and exhibit 'normal' behaviour when their delusions are not being discussed [11]. DD is generally a stable disorder however a proportion do go on to develop schizophrenia.

Further the DSM 5 specifies that any affective episodes if present are brief in relation to the duration of the delusions [11]. However, recently Gonzalez-Rodriguez and colleagues [13] conducted a systematic review of depressive symptoms in DD. Both the DSM 5 and the ICD-11 define DD as having an absence of affective symptoms; however, many individuals with DD have depressive symptoms and some contend

that individuals with DD are at an increased risk of developing depressive symptoms [11,13]. Thus, even though the current diagnostic systems exclude affective symptoms, the nosology of DD continues to be contentious [13]. A systematic review of depressive symptoms in DD found that 20.9% to 53.5% of individuals have comorbid depressive symptoms [13].

The DSM-5 provides specifiers dependent upon the content of the delusions [11]. Erotomanic sub-type is concerned with the individual being loved by another individual. Grandiose type pertains to the individual believing they have some special and unrecognised ability or power. The jealous sub-type pertains to the individual believing their partner is being unfaithful. The persecutory sub-type pertains to the individual believing they are being persecuted in some manner, for example; followed, conspired against, drugged etc. The somatic sub-type relates to the central theme of the delusion pertaining to the individuals' body and bodily functions [11]. The mixed category denotes that the individuals' delusion does not have a principal theme. While the unspecified category pertains to delusions where the central theme has not been determined or it does not fit into the predesignated categories [11].

Epidemiology of Delusional Disorder

Joseph and Siddiqui [9] reported that the lifetime risk of DD in the general population ranges from 0.05% to 0.1%. While the American Psychiatric Association [11] in the DSM 5 contend that DD has a prevalence rate of 0.02%. Further, Diaz-Caneja and colleagues [14] reported an estimated prevalence rate of 0.03% in clinical samples and a prevalence rate of 0.18% in the general population. Despite the differing estimated prevalence rates, it is apparent that DD is uncommon and has a lower prevalence rate than other psychotic disorders, for example; schizophrenia and bipolar disorder [9]. This difference in prevalence rates could possibly be explained by lower levels of reporting due to help seeking; as those with DD tend to have a higher level of global functioning and as such may only seek help if forced by family and friends [9,11].

In comparison to schizophrenia, DD has a later age of onset with the mean age of onset being 40 years of age, however DD has an onset range of 18 years to 90 years has been reported [9, 15, 16]. The DSM 5 stipulates that DD can occur in younger age groups although it is more prevalent in older age groups [11]. Moreover, research has indicated males have a younger age of onset and are more likely to have an acute onset, than females [17].

The DSM 5 reports no gender differences in the overall frequency of DD [11]. Similarly, Kulkarni and colleagues [18] also found no gender differences. While an older study also found DD to be more prevalent among men [15]. In contrast others have reported gender differences in the overall frequency of DD, Munoz-Negro and colleagues [7] found more women had DD in comparison to men in their study of a dimensional continuum model of psychotic disorders. Similarly, de Portugal and colleagues [17] found more females than males were diagnosed with DD, specifically 1.6 to 1, respectively. Recently Gonzalez-Rodriguez and colleagues [19] suggested the difference may be contextual and dependent upon the methodology used. For example, in the context of substance abuse more males will be found to have DD [19].

The DSM 5 reports the most common sub-type of DD to be persecutory [11,15]. Despite reporting no overall gender difference in frequency, frequency may deviate by sub-type, with jealous type being more common in males than females [11,15]. Similarly, Joseph and Siddiqui [9] report the erotomanic subtype to be more common in females and the persecutory and jealous subtype to be more common in males.

Aetiology of Delusional Disorder

There is no single clear cause of DD. DD can be precipitated by substance use as well as certain medical and neurological conditions [9]. In addition, research has indicated associations between DD and certain premorbid personality types. Individuals who are hypersensitive, distrustful, envious, and suspicious as well as those with a low self-esteem and that are socially isolated are more predisposed to forming delusions [9]. Similarly, earlier research has also indicated that prior to the onset of delusions, paranoid and avoidant personality traits have been evident in some individuals [15]. Likewise, de Portugal [17] found that men with DD had a higher rate of premorbid personality disorders, specifically, schizoid and schizotypal as well as premorbid substance abuse. While Kulkarni and colleagues [18] in a study of DD patients found that infidelity followed by persecutory delusions were common.

Little is known about the sociodemographic profile of DD [18]. In comparison to paranoid schizophrenia specifically; individuals with DD have fewer first-degree relatives with mental illness and are less frequently from a broken home [8]. Others have reported an increased prevalence of DD in migrants and those that are socially isolated [12].

Previously it was postulated that there were two types of DD; reactive, resulting from a precipitating factor and non-reactive [20]. Pillman and colleagues [20] found that individuals with reactive DD reported higher levels of neuroticism and displayed dependent and borderline personality traits. Roudsari and colleagues [6] contend that research has indicated issues with cognition, specifically; with working memory, attention and executive function, however more research is needed.

Recently Wolf and colleagues [21] assessed grey matter volume and cortical surface in DD (paranoid-type). It was evident that grey matter was abnormal in the right prefrontal region, the area that is attendant to belief evaluation and structural abnormalities were apparent in areas associated with the processing of fear, anxiety and threat [21]. Thus, showing a physiological basis of DD that may cause the disorder.

Symptomology of Delusional Disorder

Kulkarni and colleagues [18] ascertain that little is known about the clinical profile of DD. Munoz-Negro and colleagues [7] conducted a study to investigate the psychopathological dimensions across three psychotic disorders, namely; schizophrenia, DD and schizoaffective disorder. They found that five dimensions, specifically; manic, negative, depressive, positive and cognitive symptoms accounted for approximately 60% of the variance across the three disorders. It was evident that individuals with DD had tended to exhibit less cognitive and negative symptoms; although they did still exhibit symptoms from each of these dimensions. Similarly, Serretti and colleagues [5] conducted a factor analytic study of symptoms in DD. It was evident that DD symptoms derived from four principal factors, namely; depressive symptoms, hallucinations, delusions and irritability [5]. Another study found that nearly 50% of partici-

pants in their study with DD had depressive symptoms severe enough to warrant antidepressant treatment [18]. These findings contradict the DSM 5 diagnostic criteria of DD as negative symptoms are exclusionary to the diagnosis of DD in the classification. Specifically, regarding cognitive symptoms, individuals with DD exhibited less cognitive symptoms than individuals with schizophrenia or schizoaffective disorder however they did still have a degree of cognitive impairment [7].

Similarly, Diaz-Caneja and colleagues [14] conducted a study investigating cognition and functionality in DD. It was evident that functionality was not only affected by the delusion, or the implications of the delusion as previously believed, functionality was impacted by cognition in a similar manner to schizophrenia. Thus, cognitive impairment was apparent in DD, akin to that in schizophrenia however to a lesser degree in DD. The study also indicated that higher scores on the paranoid and cognitive dimensions couple with lower scores on the verbal memory dimension were associated with lower psychosocial functioning [14]. While lower scores on verbal memory and executive functions were associated with higher levels of self-reported disability. Thus, verbal memory and cognitive symptoms affect functionality in DD beyond paranoia [14].

Peralta and Cuesta investigated the dimensional correlates of delusional experience in DD and schizophrenia it was apparent that most of the associations evident in DD pertained to the dimensions of extension and bizarreness. Marneros and colleagues [8] found that individuals with DD had lower scores on the disability assessment scale and the positive and negative affect scale in comparison to those with schizophrenia.

Gonzalez-Rodriguez and colleagues [22] investigated the impact of menopause upon DD in women; as prior research has supported the association between estrogen levels and the severity of psychopathology in women. The findings indicated that pre-menopausal women had a longer duration of untreated psychosis in comparison to post-menopausal women. At a 24-month follow-up the pre-menopausal women reported higher levels of depression than their post-menopausal counterparts.

Course and Outcomes of Delusional Disorder

An older follow-up study conducted over thirty years found that sixty percent of DD patients had completely recovered or only had a mild residual personality impairment after thirty years [15]. However, others report that individuals with DD remain relatively stable [9]. In comparison to schizophrenia and schizoaffective disorder global functioning was better for those with DD [7]. While de Portugal and colleagues [17] found that males tend to have more severe symptoms and poorer functioning than females.

Patients with DD fare much better in both illness course and outcomes than patients with schizophrenia [15]. Previously DD was conceptualised as either being reactive resulting from a precipitating factor or non-reactive not resulting from a precipitating factor [20]. It was thought that individuals with reactive DD had better outcomes than those with non-reactive DD. A 10-year follow-up study found that there was no difference in the course or outcomes between the two groups [20].

Rowland and colleagues [16] conducted a study investigating the longitudinal course of first episode psychosis in DD as the longitudinal outcomes of first episode psychosis in DD are under studied. Individuals with DD generally have a shorter period of untreated psychosis in comparison to those with schizophrenia and at baseline patients with DD had lower symptoms scores and better overall functioning than those with schizophrenia. After 12-months the difference in symptom scores remained however there was no difference in functioning between the two groups. Thus, the authors concluded that DD in the first episode psychosis population presents with less severe symptoms, better functioning and higher recovery rates [16].

There is a dearth of knowledge pertaining to treatment across the board; specifically, psychopharmacological, neuropsychological and psychotherapeutic treatment options [6]. Traditionally DD was conceived as a treatment resistant disorder, however some patients do benefit from antipsychotics and other treatments [23]. A recent Cochrane review of treatments (psychological and pharmacological) for DD only identified one small randomised controlled trial that met the inclusion criteria [24]. The one study assessed the use of Cognitive Behavioural Therapy (CBT) against a placebo. CBT was found to have a positive effect on self-esteem findings beyond this were difficult to interpret due to the very small sample size and attrition [24]. The authors conclude that there is a dearth of high quality evidenced based research to inform the treatment of people with DD.

A study of clinical course of DD conducted by Kulkarni and colleagues [18] found that 52.6% exhibited a good response to treatment. However, the diagnosis of most of the participants in their study remained unchanged. The authors conclude that the challenges pertaining to treating patients with DD relate to adherence with treatment, with treatment having a good response if the patient adheres to the regime [18]. Further others have claimed that the treatment of DD is hindered by a lack of insight of individuals who have the disorder and thus adherence to treatment [9]. Similarly, the findings of a large Swedish study investigating the effectiveness of antipsychotics in DD found that antipsychotic use reduced the risk of hospitalisation and work-related disability in individuals with DD [25]. Clozapine and long-acting injectable antipsychotics were found to be the most effective [25].

Moreover, Munoz-Negro and Cervilla [3] ascertain that antipsychotic treatment is standard for the treatment of DD. However, there is no specific second generation antipsychotic recommended; thus, they conducted a systematic review to compare the use of first- and second-generation antipsychotics as previous research is limited, and no randomised controlled trails have been conducted. The results indicated that 33.6% of individuals with DD responded to antipsychotic treatment. First generation antipsychotics displayed a slightly superior response to second generation antipsychotics, being; 39% to 28%, respectively. The findings did not indicate that a specific antipsychotic is the most effective [3]. The authors contend that clinical trials are needed [3].

However, findings of a systematic review have questioned the operational definition of antipsychotic response in DD with all eleven studies included in the review operationalising response differently [26]. Thus, there is a lack of consensus regarding antipsychotic response in DD leading to inconsistencies in the research. Gonzalez-Rodriguez and colleagues [26] contend that the recently suggested scale derived cut-offs for antipsy-

chotic response in schizophrenia studies should be applied in DD research.

There is limited research pertaining to DD generally with research regarding the treatment of older adults with DD being even more limited. Thus, Nagendra & Snowdon [12] conducted a study investigating the use of antipsychotics and treatment outcomes in Australian adults with DD over 65-years-of-age. The study measured sociodemographic variables, antipsychotic use, clinical characteristics and outcomes. It was evident that persecutory delusions were the most prominent with 87% of the sample reporting persecutory delusions. Non-prominent hallucinations were experienced by 18% of the sample and 22% reported depressive symptoms. A statistical association was evident between social isolation and DD. Fifty-eight percent of the participants were prescribed atypical antipsychotics. Twenty percent recovered and another 35% improved; thus, clinical improvement was evident in more than half the sample. Of those who received atypical antipsychotics 96% experienced clinical improvement [12]. In comparison to paranoid schizophrenia individuals with DD are less likely to be hospitalised and if they are hospitalised, they have a shorter duration of stay [8]. Further they also have better overall outcomes, and the disorder remains stable over time [8].

It has been suggested that treatments for DD should be tailored to gender due to the frequent differentiation of the content of the delusions between the two groups, however there is no evidence to differentiate treatments between the genders [27]. Rather, the content of the individual's delusions needs to be carefully addressed with a particular emphasis on dealing with the emotions associated with the delusions and teaching coping strategies to deal with the emotions [27].

Employment is known to be very beneficial to individuals with mental illness having numerous positive effects [28]. Recently Guhne and colleagues [28] assessed the rate of employment of those with serious mental illness in Germany the findings indicated that only 34% of participants were employed. The results were not analysed by disorder; however, it is known that individuals with DD have substantially better functioning than individuals with schizophrenia and schizotypal disorder; thus, suggesting that a number of those employed probably have a diagnosis of DD.

Discussion

Clearly DD remains under researched with available research in a range of areas reporting inconsistent results [6]. Primarily the nosology of DD remains contentious, and the current diagnostic criteria does not adequately reflect the symptomology seen in practice. As despite the DSM 5 criteria stating that affective episodes need to be brief for a diagnosis of DD to be given even though all other criteria are met, there is growing empirical evidence of the experience of affective symptoms in DD, in particular depression. A recent systematic review found that 20% to 50% of patients with DD have comorbid depressive symptoms [13]. Similarly, the DSM 5 criteria does not include cognitive and negative symptoms, however research has indicted that individual with DD also experience cognitive and negative symptoms like those in schizophrenia, however to a lesser degree compared to other psychotic disorders [7]. Thus, the delineation of the core symptomology of DD and the associated diagnostic criteria remains uncertain and controversial. Further Kraepelin in his original conception of paranoia stipulated that the content of the delusions was non-bizarre, however the DSM 5 criteria includes delusions with bizarre content [2,3,11]. Others contend that DD should not include delusions with bizarre content as such delusions are associated with schizophrenia. Moreover, the DSM 5 criteria specifies that patients with DD have the ability for factual insight, however research has indicated that a lack of insight in DD patients which leads to issues with adherence to treatment [9, 18]. Thus, the nosology and associated diagnostic criteria remain uncertain.

In relation to epidemiology there are also apparent inconsistencies, with inconsistent results pertaining to the gender-based prevalence of DD [13]. Regarding the overall prevalence rates of DD; although the identified rates were all different, they were quite similar. Thus, basic epidemiological questions remain. Similarly, the aetiology of DD also requires investigation and understanding. As little is known about the sociodemographic profile of those with DD and further research is required into the aetiology in particular the association with premorbid personality traits and disorders. A greater understanding in both areas could facilitate earlier diagnosis as well as interventions targeted towards preventing the development of DD in those deemed to be at risk.

It is also evident that there is a lack of research and understanding pertaining to both the course and outcomes of DD as well as inconsistencies in the existing research. For example, some studies indicate that the disorder remains stable, while others report a good recovery rate [9,15]. Further there is a lack of evidenced based treatments for DD as the area has been understudied and akin to all other areas there are inconsistencies in the findings. There are no randomised clinical trials of pharmacological treatments [3,24] and other treatment studies lack a consistent measure of antipsychotic response [26]. Further there is no recommended superior antipsychotic for the treatment of DD [3,25]. Thus, more research is needed to ascertain the course, treatment and outcomes of DD.

Conclusion

Overall, it is apparent that there remains a general dearth of understanding regarding most aspects of DD and little or no consensus in the research that is available across most areas of DD. It is clear that the nosology of the disorder is contentious with diagnostic criteria not reflecting the complexities of DD in practice. The epidemiology of DD remains poorly understood with inconsistencies noted regarding the prevalence and gender distribution of the disorder. Little is known about the aetiology of DD or the sociodemographic profile of those with the disorder. Further the symptomology, clinical course, treatment and outcomes remains poorly understood and are understudied. Thus, it is imperative that future research seeks to gain a greater understanding of all aspects of DD in order to inform all aspects of DD; from identification of those with DD to their symptomology and treatment.

References

1. Wustmann T, Pillman F, Marneros A. Gender-related features of persistent delusional disorders. European Archives of Psychiatry and Clinical Neurosciences; 2011; 261: 29-36.
2. Winokur G. Delusional disorder. Comprehensive Psychiatry; 1977; 18(6): 511-521.
3. Munoz-Negro JE, Cervilla JA. A systematic review on the pharmacological treatment of delusional disorder. Journal of Clinical Psychopharmacology; 2016; 36(6): 684-690.
4. Kendler KS. The nosologic validity of paranoia (simple

delusional disorder). Archives of General Psychiatry; 1980; 37: 699-706.
5. Serretti A, Lattuada E, Cusin C, Smeraldi E. Factor analysis of delusional disorder symptomatology. Comprehensive Psychiatry; 1999; 40(2): 143-147.
6. Roudsari MJ, Chun J, Manschreck TC. Current treatments for delusional disorder. Current Treatment Options in Psychiatry; 2015; 2: 151-167.
7. Munoz-Negro JE, Ibanez-Casas I, de Portugal E, Ochoa S, Dolz M, Haro JM, et al. A dimensional comparison between delusional disorder, schizophrenia and schizoaffective disorder. Schizophrenia Research; 2015; 169: 248-254.
8. Marneros A, Pillman F, Wustmann T. Delusional disorders – are they simply paranoid schizophrenia? Schizophrenia Bulletin; 2010; 38(3): 561-568.
9. Joseph SM, Siddiqui W. Delusional Disorder. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing, 2022. PMID: 30969677.
10. Peralta V, Cuesta MJ. An empirical study of five sets of diagnostic criteria for delusional disorder. Schizophrenia Research; 2019; 209: 164-170.
11. American Psychiatric Association. The Diagnostic and Statistical Manual of Mental Disorders (5th ed). Washington DC: American Psychiatric Association, 2013.
12. Nagendra J, Snowdon J. An Australian study of delusional disorder in later life. International Psychogeriatrics; 2020; 32(4): 453-462.
13. Gonzalez-Rodriguez A, Monreal JA, Porras-Segovia A, Cervilla JA, Gutierrez-Rojas L. Psychometric instruments for the assessment of depressive symptoms in patients with delusional disorder: a systematic review. Psychiatry Research; 2022; 310: 114435.
14. Diaz-Caneja CM, Cervilla JA, Haro JM, Arango C, de Portugal E. Cognition and functionality in delusional disorder. European Psychiatry; 2019; 55: 52-60.
15. Opjordsmoen S. Long-term course and outcome in delusional disorder. Acta Psychiatrica Scandinavica; 1988; 78: 576-586.
16. Rowland T, Birchwood M, Singh S, Freemantle N, Everard L, Jones P, et al. Short-term outcome of first episode delusional disorder in an early intervention population. Schizophrenia Research; 2019; 204: 72-79.
17. de Portugal E, Gonzalez N, Miriam V, Haro JM, Usall J, Cervilla JA. Gender differences in delusional disorder: evidence from an outpatient sample. Psychiatry Research; 2010; 177: 235-239.
18. Kulkarni KR, Arasappa R, Prasad KM, Zutshi A, Chand PK, Muralidharan K, et al. Clinical presentation and course of persistent delusional disorder: data from a tertiary care centre in India. The Primary Care Companion for CNS Disorders; 2016; 18(1): 10.4088/PCC.15m01883.
19. Gonzalez-Rodriguez A, Esteve M, Alvarez A, Guardia A, Monreal jA, Palao D, et al. What we know and still need to know about gender aspects of delusional disorder: a narrative review of recent work. Journal of Psychiatry and Brain Sciences; 2019; 4: e190009.
20. Pillman F, Wustmann T, Marneros A. Clinical course and personality in reactive, compared with nonreactive, delusional disorder. Canadian Journal of Psychiatry; 2012; 57(4): 216-222.
21. Wolf RC, Hildebrandt V, Schmitgen MM, Pycha R, Kirchler E, Macina C, et al. Aberrant gray matter volume and cortical surface in paranoid-type delusional disorder. Neuropsychobiology; 2020; 79(4-5): 335-344.
22. Gonzalez-Rodriguez A, Molina-Andreu O, Penades R, Garriga M, Pons A, Catalan R, et al. Delusional disorder over the reproductive life span: the potential influence of menopause on the clinical course. Schizophrenia Research and Treatment; 2015: 979605.
23. Gonzalez-Rodriguez A, Guardia A, Palao DJ, Labad J, Seeman MV. Moderators and mediators of antipsychotic response in delusional disorder: further steps needed. World Journal of Psychiatry; 2020; 10(4): 34-45.
24. Skelton M, Khokhar WA, Thacker SP. Treatments for delusional disorders. Cochrane Database of Systematic Reviews; 2015; 5: CD009785.
25. Lahteenvuo M, Taipalre H, Tanskanen A, Mittendorfer E, Tiihonen J. Effectiveness of pharmacotherapies for delusional disorder in a Swedish national cohort of 9076 patients. Schizophrenia Research; 2021; 228: 367-372.
26. Gonzalez-Rodriguez A, Estrada F, Monreal JA, Palao D, Labad J. A systematic review of the operational definitions for antipsychotic response in delusional disorder. International Clinical Psychopharmacology; 2018; 33(5): 261-267.
27. Gonzalez-Rodriguez A, Seeman MV. Addressing delusions in women and men with delusional disorder: key points for clinical management. International Journal of Environmental Research and Public Health; 2020; 17: 4583.
28. Guhne U, Pabst A, Kosters M, Hasan A, Falkai P, Kilian R, et al. Predictors of competitive employment in individuals with severe mental illness: results from an observational, cross-sectional study in Germany. Journal of Occupational medicine and Toxicology; 2022; 17: 3.