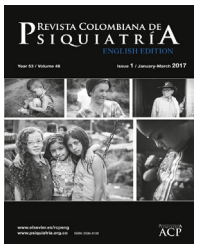
Asociación Colombiana de Psiquiatría ACP

Revista Colombiana de Psiquiatría

www.elsevier.es/rcp



Review Article

Self-disorders in early stages of the schizophrenia spectrum☆

Rubén Valle[a,b,c,*], *Alberto Perales*[b,d]

[a] *Centro de Investigación en Epidemiología Clínica y Medicina Basada en Evidencias, Facultad de Medicina Humana, Universidad de San Martín de Porres, Lima, Peru*
[b] *Facultad de Medicina de San Fernando, Universidad Nacional Mayor de San Marcos, Lima, Peru*
[c] *DEIDAE de Adultos y Adultos Mayores, Instituto Nacional de Salud Mental Honorio Delgado-Hideyo Noguchi, Lima, Peru*
[d] *Instituto de Ética en Salud, Facultad de Medicina, Universidad Nacional Mayor de San Marcos, Lima, Peru*

ARTICLE INFO

Article history:
Received 5 October 2017
Accepted 8 February 2018

Keywords:
Self-disorders
Ipseity
Schizophrenia
Schizophrenia spectrum and other psychotic disorders

ABSTRACT

The pathogenic nucleus of schizophrenia has varied according to the different eras and influences of distinguished clinical researchers. Self-disorders have also been recognised to be at the heart of this disorder, although they have seldom been studied due to their subjective nature. Recently, due to the growing interest in the study of the early stages of schizophrenia, the study of self-disorders has been resumed. The self-disorders in schizophrenia model, developed by Sass and Parnas, proposes that in this disorder the person suffers loss of the first-person perspective and experiences hyperreflexibility, diminished self-affection and disturbance of the field of awareness. Therefore, the person experiences feelings of strangeness about him/herself, difficulty in understanding the common sense of things and difficulty interacting with his/her environment. Based on this model, self-disorder evaluation instruments have been developed and empirical studies have been conducted to evaluate people at risk of developing a schizophrenia spectrum disorder. These studies show that self-disorders are found in prepsychotic stages and that their manifestation may predict the transition to schizophrenia spectrum disorders. These results have important clinical implications as they enable people in the early stages of the disorder to be identified and create the opportunity to apply early therapeutic interventions.

DOI of original article: https://doi.org/10.1016/j.rcp.2018.02.003.
☆ Please cite this article as: Valle R, Perales A. Alteraciones del Yo en las fases iniciales del espectro esquizofrénico. Rev Colomb Psiquiat. 2019;48:244–251.
* *Corresponding author.*
E-mail address: ruben_vr12@hotmail.com (R. Valle).
https://doi.org/10.1016/j.rcpeng.2018.02.004

Alteraciones del Yo en las fases iniciales del espectro esquizofrénico

Palabras clave:
Alteraciones del Yo
Yo mínimo
Esquizofrenia
Espectro de esquizofrenia y otros trastornos psicóticos

RESUMEN

El núcleo patogénico de la esquizofrenia ha variado de acuerdo con la época y la influencia de insignes investigadores. También se ha reconocido a las alteraciones del Yo como el eje de este trastorno, aunque están poco estudiadas debido a su naturaleza subjetiva. En los últimos años, dado el creciente interés por las fases iniciales de la esquizofrenia, se ha retomado el estudio de las alteraciones del Yo. El modelo de las alteraciones del Yo en la esquizofrenia, desarrollado por Sass y Parnas, propone que en este trastorno la persona sufre pérdida de la perspectiva en primera persona y experimenta fenómenos de hiperreflexibilidad, el sentido disminuido del Yo y trastornos del campo de la conciencia. Por ello, experimenta sentimientos de extrañeza de sí mismo, dificultad para entender el sentido común de las cosas y problemas de interacción con el entorno. Con base en este modelo, se han elaborado instrumentos de evaluación de las alteraciones del Yo y se han conducido estudios empíricos para la evaluación de pacientes en riesgo de sufrir un trastorno del espectro esquizofrénico. Estos estudios muestran que las alteraciones del Yo se encuentran en estadios prepsicóticos y que su presencia puede predecir la transición a trastornos del espectro esquizofrénico. Estos resultados tienen importantes implicaciones clínicas, pues permiten identificar a personas en fases iniciales del trastorno y crean la oportunidad de aplicar intervenciones terapéuticas tempranas.

Introduction

Psychiatry has focused on the study of the established phases of schizophrenia, dominated by the so-called Schneiderian first-rank symptoms.[1] These stages of the disorder reflect the accumulated sediments of the aetiopathogenic factors, effects of the treatment and coping attempts, which is why the primary basis of the condition cannot be determined by studying the disorder in these stages.[2] In contrast, the early stages of the disorder have received less attention and have only been addressed academically in recent decades, despite being the closest to the aetiopathogenic and trigger factors. These studies include phenomenological approach research focused on the study of the early phases of schizophrenia with the objective of identifying predicative variables and markers of vulnerability, facilitating early intervention in the progression of the disorder.[3] Currently, these studies are carried out on the presumption that early intervention in the disorder may improve its long-term outcomes, and therefore delay, slow down or even prevent the onset of the condition.[4–6]

One of the models used for the study of the early phases of schizophrenia is the Gerd Huber basic symptoms model.[7,8] This approach is based on the psychopathological observation that symptoms of the prodromal phases of schizophrenia are characterised by symptoms of a non-psychotic, subjective and non-specific nature.[9,10] These manifestations are called "basic", due to the consideration that these symptoms precede the clear psychotic symptoms of schizophrenia.[8] The empirical study of basic symptoms started with the semi-structured instrument called the Bonn Scale for the Assessment of Basic Symptoms (BSABS),[11] which is a semi-structured interview that enables such manifestations to be evaluated. The results of these studies showed that basic symptoms were present in the schizophrenia prodromal phases.[12] In addition, it was observed that self-disorders, a concept closely related to that of basic symptoms, were prevalent in these stages.[13,14]

Several psychopathologists at the start of the TWENTIETH century postulated that the self-disorder was a basic substrate of schizophrenia. However, this concept was abandoned for most of the second half of the century.[15] In recent years, this approach has been taken up again due to the growing interest in the early phases of schizophrenia. The current model that postulates the presence of self-disorders in schizophrenia, proposed by Sass and Parnas, suggests that the person affected suffers mainly from a loss of first-person perspective.[16] This is manifested in a series of non-psychotic symptoms, by which the person experiences reality in a distorted manner.[15,16] Self-disorders had not been studied empirically in schizophrenia due to the subjective characteristics typical of the object of study. However, the development of evaluation instruments such as the Examination of Anomalous Self-Experience (EASE) has enabled the systematic study of these manifestations in schizophrenia.[17]

The aim of this paper was to review the scientific literature and studies which show self-disorders in the initial phases of the schizophrenia spectrum. In this sense, the concept of the self, its characteristics and morbid alterations are analysed. Finally, the studies which show self-disorders in the prodromal phases of the schizophrenia spectrum are presented.

Historical background

The first notions of self arose in Greece, where Plato and Aristotle were the first to discuss the need for an individualisation

theory of objects and entities.[18] However, the concept of self as it is known today was developed by the first Stoic philosophers who considered the *hêgemonikon* as a component of the soul that made experiences be identified as individual.[1] In the SEVENTEENTH century, Descartes identified the self with the *res cogitans* (thinking substance) and considered that it was the basis for the belief of existence of the external world.[19] In the EIGHTEENTH century, the anatomo-clinical model of disorders promoted reification of the self, and statements on its location and pathology were postulated.[1] At the end of the NINETEENTH century, the concept of the self reached psychiatry, its disorders were formulated and its morbid fragility was recognised. Since its arrival in this field, the self and its disorders have been studied to explain the psychopathological development of schizophrenia.[1]

Since the start of the TWENTIETH century, different authors have recognised with variable clarity the existence of self-disorders in schizophrenia.[15] Kraepelin suggested that the core of this disorder resided in a deep "disunity of consciousness".[20] Bleuler signalled that experiential ego-disorders shaped the fundamental complex symptoms of schizophrenia.[21] For Kurt Schneider, the person with schizophrenia suffered a "radical qualitative change in the thought process", which caused the first-rank symptoms.[22] Similar statements were also made by Eugène Minkowski, Karl Jaspers, Klaus Conrad and Wolfgang Blankenburg.[23] However, it was Joseph Berze (1914) who explicitly proposed that the primary schizophrenia disorder was due to a self-disorder.[1,24] After a period of continuous research during the first part of the TWENTIETH century, the study of self-disorders in schizophrenia diminished during the remainder of the century.[15] However, in recent decades there has been renewed interest in the topic, linked to the study of schizophrenia in its first stages.[1]

Despite the multiple studies carried out in different disciplines, the self continues to be one of the most important and elusive concepts in the study of mental disorders.[25] There is much debate concerning its ontology and, ultimately, its real nature, whether as a substance, object or process.[4] As a concept of the mind, the self lacks specific characteristics and it does not seem to belong to the physical world.[1] There are even authors who mention that this concept is only a creation of Western thinking and lacks an objectifiable nature, which prevents it from being studied scientifically.[1] The uncertain clarity about its nature has meant that different areas of knowledge, such as philosophy of mind, cognitive sciences and developmental psychology, among other knowledge trends, have addressed this concept.[26] The lack of consensus on the real nature of the self makes it difficult to construct a general definition that all disciplines accept by convention, meaning that there are currently up to 21 definitions of the self.[27]

The self

The phenomenological approach that was the basic tool of the first psychiatry tools developed studied the self by analysing it as the awareness that a person has about him/herself as a vigil and lucid subject: "I am myself".[28] This natural, tacit and pre-reflective notion offers the knowledge of who one is, who is the author of their actions and who is different from the surroundings.[15] Similarly, this same notion makes it possible to experience moods, perceive stimuli and develop within a personal life path.[28] The self can also be understood as a fundamental, mental and body unity, which is basic to the experience and through which one's own existence is lived.[1] This concept, of a personal, subjective and abstract nature, which provides the ability to experience reality, is the fundamental structure by which a person feels him/herself and interacts with the world.[15]

The self has characteristics which are identified more clearly in the experiences of ill individuals, because in "healthy" subjects these occur logically.[28] According to Jaspers, self-awareness has four formal characters: the feeling of activity, awareness of one's own activity; awareness of unity, I am one at the same time; awareness of identity, I am always the same, and self-awareness in opposition to external factors and others.[29] Honorio Delgado described eight characteristics of self-awareness, including those highlighted by Jaspers (although not always with the same name): the distinction of self-awareness compared to the awareness of the external world in general and of other people in particular; the belief of personal existence; the feeling of existing fullness; the feeling of virtual constancy; the feeling of activity; awareness of autonomy; awareness of unity, and awareness of identity.[30] In recent decades, Scharfetter, based on factor analysis studies, added the dimension of vitality, which is the notion enabling a person to experience his/her existence in a natural and logical manner, to the characteristics described by Jaspers.[28]

On the other hand, for Sass and Parnas the fundamental characteristic of self is the first-person perspective. This characteristic can be understood as a point of view, the way of considering situations or events, or the appearance that objects have amongst themselves from the observer's position.[26,31] The concept of the first-person perspective differs according to the study approach. For example, for phenomenology, this characteristic of self refers to the content of the actual "field of experience" and emphasises its ontological irreducibility and its epistemic privacy.[26] On the other hand, for cognitive science, the first-person perspective refers to the private consciousness, which is populated by experiences belonging to the self.[26] Regardless of the study approach, it is considered that the first-person perspective is the characteristic of the self which enables one to appreciate the external world by means of affectivity that grants the feeling of existence and awareness of what the "space" is where the reality experienced appears.[23]

The minimal self and narrative self

Phenomenology has divided the self into the narrative self and the minimal self.[32] The first, also known as the social self or the autobiographical self,[32,33] is a self which is made up of a past and a future based on the experiences lived and what it says about us.[32] It is what Neisser called the extended self, due to expanding in time and covering memories of the past and future intentions.[34] This mode of self can be understood as a

succession of momentary feelings which are closely subject to imagination.[23] In fact, the narrative self is not something which is materially real, but instead an abstraction which makes it possible to have a sense of continuity of life.[32] A necessary condition for the construction of the narrative self is the adequate functioning of the episodic memory which provides information on the autobiographical events of the person.[32] The narrative self becomes specifically evident in the concepts of social identity, personality, habits and personal history of the person.[33]

On the other hand, the minimal self, also known as the basic, nuclear and pre-reflective self or ipseity (from the Latin *ipse*: self) is the awareness that a person has of him/herself as an immediate subject of the experience which he/she is having in the here and now.[26,33] It is the essential and necessary component so that the experience is had in the first person and experienced as belonging to oneself.[16] The minimal self grants the feeling of identity, which makes the person become aware of his/her own self and avoid processes of introspection or self-reflection recurring to ensure him/herself of being who he/she is.[15] This mode of self is not a product of reflection which "appears" as a type of object towards which one may direct their attention.[15] On the contrary, it is only manifested pre-reflectively through experience and persists over time through different situations of conscious living.[15,16] Therefore, the minimal self is pre-reflective, timely, non-inferential and works as a stratum based on our experiential life.[15,26]

The minimal self has the sense of agency and the sense of ownership as phenomenological characteristics.[26,32] The sense of agency refers to the experience that a person is generating an action by his/herself.[35] For example, feeling that I am the one who is causing something to move or generating a certain thought.[32] Psychotic phenomena such as auditory hallucinations, delusions of control and thought insertion correspond to a basic alteration of the sense of agency.[32] In contrast, the sense of ownership is the certainty that the person has of it being him or herself who is having an experience, in other words, that this experience belongs to him or her as a person.[35] The sense of ownership is not necessarily pre-reflective, as we can recognise our acts (e.g. movements) without having to reflect whether they are really ours. Examples of the sense of ownership are feeling that the body moves independently, if the movement is voluntary or involuntary or that the body is one's own even when it does not move.[32]

Minimal self-disorders

Minimal self-disorders have been related to the development of mental disorders in the field of psychiatry. While narrative self-disorders have been related to personality disorders,[14] minimal self-disorders have traditionally been associated with the development of schizophrenia.[16,23,36,37] The latter consideration has been included in the self-disorder model of schizophrenia by Sass and Parnas, for whom the minimal self-disorder produces a breakdown in the structure of the experience that the first-person perspective manages.[33] This results in the person experiencing a reduction of harmony and immersion in the world and difficulty understanding the evident meanings of daily life (loss of common sense) and acquiring attitudes of hyperreflexivity in their actions.[33] This model also considers that the positive, negative and disorganised symptoms of schizophrenia, although clinically different, share forms of self-disorders in their foundations.[23]

Two aspects of minimal self-disorders described in schizophrenia are hyperreflexivity and diminished self-affection.[16,23] Hyperreflexivity comes from the term "reflective", referring to situations in which an individual takes him/herself or any aspect of him/herself to be an object of his/her own attention.[23] In schizophrenia, this process occurs in an exaggerated manner, which is why patients tend to adopt hyperreflective attitudes.[15] Hyperreflexivity is an exaggerated awareness of the self, which is manifested by the tendency to monitor the processes that should normally be experienced tacitly.[23] In this sense, the routine and natural phenomena experienced as part of oneself go to the forefront and end up being converted into objects of focal awareness.[16,23] This manifests in that the person tends to be highly reflective in the event of usual sensations of daily life, which ends up creating doubt, surprise and strange meanings for these experiences.

Furthermore, diminished self-affection emphasises a complementary aspect of hyperreflexivity.[16] This pathological characteristic of the minimal self, also called reduced belief of personal existence, refers to a decline in the sense of existing as a subject of consciousness or agent.[16,23] This concept can also be understood as a reduction in the basic and implicit sense of existing as a vital centre of consciousness or source of brightness that is sometimes called "pre-reflective cogito".[38] This manifests in a reduction in the intensity of one's subjectivity and results in a reduction in the sense of existing as a subjective part of consciousness.[23] As a result, the subjective experience is no longer experienced automatically and immediately as one's own.[39,40] Diminished self-affection and hyperreflexivity are not constant over time, but instead they increase or decrease depending on the perspective, orientation and attitude of the person towards the world.[23]

Hyperreflexivity and diminished self-affection are two aspects of self-disorders that seem to be mutually contradictory but in reality are interdependent.[23] While the first emphasises that something which is normally tacit becomes explicit, the second focuses on a reduced sense of existence.[16] These two characteristics of self-disorders can be considered concurrent interactive processes.[23] However, there are periods of the illness in which one aspect emerges with greater clinical prominence than the other.[41] Both facets of the self-disorder interrupt the normal, tacit and pre-reflective sense of existing as a subject of experience. This is "I as the centre", "I as the central point of psychic life" or "I as a point of origin of my own attention".[42] Finally, both processes together disrupt the field of perceptual and conceptual consciousness of the person.[33]

An additional characteristic of self-disorders are disorders in the field of consciousness, known as disturbed hold or grip. This phenomenon refers to the concomitant loss of the prominence or stability with which objects stand out in an organised field of consciousness around the individual.[23] In this phenomenon, there is a disruption of the spatio-temporal structure which one has of the world and the different experiences that occur among what is perceived, remembered and imagined.[23] Disorders of awareness of the world depend on the experience of the self, as this structure provides the point

of reference of orientation and source of motivation which our experiential world organises according to our desires and needs.[41] Consequently, apprehension disorders are frequently associated with perplexity and loss of the common sense of things.[23]

Minimal self-disorders in the schizophrenia spectrum

The classic and recent psychiatric literature agree that self-disorders form part of the core of schizophrenia.[1,15] Until a few years ago, this concept had not been studied systematically due to its subjective nature or due to being considered an abstract topic.[43] However, the growing interest in recent years in the study of early phases of schizophrenia has meant that this concept has been taken up again.[1] Therefore, different semi-structured instruments have been developed with quantitative and qualitative characteristics, which enables the comprehensive and systematic study of self-disorders in the schizophrenia spectrum, in particular in their initial stages.[11,17] The results of the studies which identify self-disorders in the initial phases of the schizophrenia spectrum disorders are presented below, according to the instruments developed for their study.

Bonn scale for the assessment of basic symptoms

The empirical and systematic study of the basic symptoms of schizophrenia, among those which include self-disorders, was initiated with the development of the Bonn Scale for the Assessment of Basic Symptoms (BSABS). This instrument is a semi-structured and comprehensive interview designed to detect cases of schizophrenia in the early stages.[11] The term "basic symptoms" proposed by Gerd Huber was used in the presumption that several of these disorders are specific to schizophrenia and are often present before psychotic symptoms appear.[13,44] The BSABS evaluates alterations of the experience in affective, volitional, cognitive, perceptual and bodily areas, and questions which specifically evaluate self-disorders were included in its latest version.[13,44] The sensitivity and specificity of the instrument are 0.98 and 0.59, respectively, and inter-rater reliability has a kappa statistic >0.60.[11]

The BSABS has shown that it is capable of identifying patients at risk of suffering from a schizophrenia spectrum disorder. One study evaluated patients with and without schizophrenia prodromal phases identified with the BSABS to analyse the transition to schizophrenia. After 9.6 years of follow-up, the authors found that the absence of prodromal phases precluded the onset of schizophrenia with a probability of 96%, while their presence predicted the condition with a probability of 70%.[13] A second study evaluated whether self-disorders in the baseline measurement of patients with non-psychotic disorders predicted the development of schizophrenia spectrum disorders.[14] The results showed that high scores in the self-disorder sub-scales and perplexity of the BSABS in the baseline measurement predicted the onset of schizophrenia spectrum disorders after five years of follow-up.[14] Although the BSABS does not exclusively evaluate self-disorders, the results of these studies showed that these disorders were closely related to schizophrenia prodromal phases.[14]

Examination of anomalous self-experience

A second instrument for the phenomenological evaluation of self-disorders specifically is the Examination of Anomalous Self-Experience (EASE).[15,17] This instrument is based on the inputs from the descriptions of classic psychopathology, notions of the "basic symptoms" of Huber and the empirical studies carried out with the BSABS.[7,15,45,46] The EASE operationalises the Sass and Parnas self-disorders model in schizophrenia and qualitatively and quantitatively evaluates sub-psychotic subjective experiences, which can be considered primary minimal self-disorders.[15,17,47] These symptoms correspond with non-psychotic disorders, which, despite their intrinsic and unclear nature, are subject to self-description and clinical evaluation.[48] Unlike the BSABS, which covers a wide spectrum of experiential phenomena, the EASE only evaluates minimal self-disorders. However, there are overlaps between both tools, in particular in the domains of cognitive disorders, coenesthesia and another group of questions.[17]

The EASE has some characteristics which have to be considered when it is applied. The scale has been designed for the evaluation of schizophrenia spectrum disorders and should not be used as a diagnostic instrument.[17] The instrument has 57 questions, defined and illustrated with typical examples of the symptom under study, and its application takes approximately 90 min.[17] The instrument gathers information on areas of cognition and the trend of consciousness, self-consciousness and presence, bodily experiences, demarcation and transitivism, and existential reorientation. Furthermore, the instrument includes questions which specifically evaluate phenomena of hyperreflexivity, diminished self-affection and disturbed hold or grip.[17] In different studies, the EASE has shown adequate psychometric properties, which are reflected in its high internal consistency,[49] its one-factor structure[48] and good to excellent inter-rater reliability.[50]

The EASE predicts the onset of schizophrenia spectrum disorders in individuals at high risk of psychosis and non-psychotic clinical populations. Nelson et al. measured self-disorders in a sample of patients at high risk of psychosis and a sample of healthy controls with the objective of examining whether the presence of these disorders predicted the transition to a psychotic disorder.[3] The results showed that self-disorders were significantly greater in patients with a high risk of psychosis, compared to the sample of healthy controls. Similarly, it was found that the total score of the EASE significantly predicted the transition to a schizophrenia spectrum disorder.[3] A second study evaluated the presence of self-disorders in non-psychotic individuals who sought medical care (aged between 14 and 18 years). The results showed that these disorders were correlated with the subclinical prodromal symptoms of the schizophrenia spectrum disorders.[5]

Furthermore, it has been found that the EASE can differentiate schizophrenia spectrum disorders from other psychiatric disorders. Nordgaard and Parnas carried out a study in a heterogeneous sample of patients in order to evaluate the specificity of the EASE to detect self-disorders. The authors

found that these disorders were more intense in those with a schizophrenia spectrum disorder than in patients with other psychiatric disorders.[49] Haug et al. applied the EASE to patients diagnosed with schizophrenia, bipolar disorder with psychotic symptoms and other psychotic disorders (delusional disorder and psychosis NOS). The results showed a higher EASE score in patients with schizophrenia than in the other two groups.[51] Nelson et al. carried out a study with the objective of examining the association between self-disorders and borderline personality disorder. The results indicated that there was no correlation between these variables.[52] These findings indicate that the EASE identifies and differentiates schizophrenia spectrum disorders from other psychiatric disorders.

On the other hand, self-disorders do not seem to be totally specific to schizophrenia spectrum disorders, as they have also been identified in depersonalisation disorders and in "healthy" people in states of introspection.[53,54] One study applied the EASE to case reports of depersonalisation and found that 72% of the instrument's questions were positive in the study sample.[54] Similarly, the application of this instrument to individuals in states of introspection found that 77% of the questions were also positive.[53] Furthermore, symptoms associated with cases of depersonalisation, introspection and schizophrenia included feelings of passivity, disappearance of the self or of the world and thought alienation,[53,54] while symptoms of dislocation, erosion and dissolution of first-person perspective were almost exclusively found in cases of schizophrenia.[53,54] The results of these studies reveal that minimal self-disorders are not exclusive to schizophrenia spectrum disorders.

Self-experience lifetime frequency scale

The EASE has demonstrated that it is effective for the study of self-disorders in the schizophrenia spectrum. However, some authors report that its application is not very practical in clinical scenarios or in large-scale studies due to the time that its application takes up.[55] With this consideration, the Self-Experience Lifetime Frequency Scale (SELF) has recently been created for the screening of self-disorders. This instrument is based on a scale which evaluates depersonalisation (Depersonalisation Severity Scale), a scale which identifies subjects at risk of a psychotic event (Comprehensive Assessment of At-Risk Mental States) and the EASE. The factor analysis showed that the most important areas of the scale were self-awareness disorders and the reduced sense of feeling oneself or depersonalisation. In the application of the scale, it was found that patients with psychotic symptoms presented higher scores than their siblings (non-psychotic) and healthy controls. The authors concluded that the instrument is appropriate for use in clinical and research scenarios.[55]

Conclusions

Although they belong to a subjective field, it has been possible to empirically evaluate self-disorders thanks to the development of instruments which systematically measure their disorders.[11,17] The studies show that self-disorders appear in the early pre-psychotic phases and may predict the development of schizophrenia spectrum disorders.[3,5,13,14] Similarly, their presence makes it possible to differentiate disorders of this spectrum from other psychiatric conditions, such as bipolar disorder, other cases of psychosis and borderline personality disorder.[49,51,52] However, it should be considered that self-disorders are not totally specific to schizophrenia spectrum disorders, as some of their domains have been identified in cases of depersonalisation and even in healthy people in a state of introspection.[53,54] For these reasons, the study of self-disorders is providing new phenomenologically-based knowledge for the nosological understanding and clinical care of schizophrenia from its first stages.

Furthermore, these findings have important repercussions in the diagnosis of schizophrenia. Currently, the diagnostic classification systems, both the ICD-10 and DSM-5 systems,[56,57] do not consider the subjective experiences of the patient within their criteria and only prioritise observable characteristics of the disorder.[1,23,49] Given that the symptomatic expressions of schizophrenia are presented in established phases, these systems can only be used to diagnose consolidated cases and are not very useful for the evaluation of patients in early stages. An attempt to recognise the early phases of schizophrenia is found in the DSM-5, which introduces the diagnostic category "attenuated psychosis syndrome".[58] However, this entity considers the same psychotic symptoms of schizophrenia, but at a sub-threshold level (duration or intensity), and it has also only been recognised for research and cannot be used in clinical practice.[58,59] Despite the fact that the concept of self is not recognised within the classification systems, it is necessary to consider it in the evaluation of people at risk of psychosis due to the predictive value of its identification in these stages.

The self-disorder model in schizophrenia has some limitations that are worth mentioning. First, a new approach indicates that disorders in schizophrenia occur at the level of the narrative self, and not the minimal self.[60] This model postulates that self-disorders in schizophrenia occur due to a disruption between the processes of forming complex ideas of the self and those of others, which produces a collapse in the experience of the self and of the behaviour aimed at goals.[60] Second, there is controversy regarding the adaptation of the Sass and Parnas model to the medical model. In the latter, the symptoms of schizophrenia and of self-disorders occur separately. However, in the Sass and Parnas model the symptoms of both entities occur at the same time.[39] Finally, Berrios and Markova discuss the real existence of the self. These authors argue that the self is not a natural entity and that, lacking an objectifiable nature, its creation only corresponds to a construction of Western thought.[1]

In summary, the notion that self-disorders are the basis for development of schizophrenia has been taken up again in recent years. These disorders are being evaluated systematically with the use of semi-structured instruments that have appropriate psychometric characteristics. These instruments have shown that such disorders are prominent in the pre-psychotic phases and that their presence predicts, with high probability, the onset of a schizophrenia spectrum disorder. These results open up opportunities for diagnosis and early intervention and, with that, for improvement of the prognosis

of the disorder in the long term. Therefore, the evaluation of self-disorders with measuring instruments, whether for clinical or research purposes, could be implemented as part of the evaluation of patients in emerging stages of psychotic organisation.

Conflicts of interest

The authors have no conflicts of interest to declare.

Acknowledgements

We would like to thank Dr Aitor Castillo Durante for his critical evaluation of the paper.

REFERENCES

1. Kircher T, David A. The self in neuroscience and psychiatry. New York: Cambridge University Press; 2003.
2. Parnas J. From predisposition to psychosis: progression of symptoms in schizophrenia. Acta Psychiatr Scand Suppl. 1999;395:20–09.
3. Nelson B, Thompson A, Yung AR. Basic self-disturbance predicts psychosis onset in the ultra high risk for psychosis "prodromal" population. Schizophr Bull. 2012;38:1277–87.
4. Segarra R. Abordaje integral de las fases iniciales de la psicosis: una visión crítica. Madrid: Médica Panamericana; 2014.
5. Koren D, Reznik N, Adres M, Scheyer R, Apter A, Steinberg T, et al. Disturbances of basic self and prodromal symptoms among non-psychotic help-seeking adolescents. Psychol Med. 2013;43:1365–76.
6. Yung AR, McGorry PD. The prodromal phase of first-episode psychosis: past and current conceptualizations. Schizophr Bull. 1996;22:353–70.
7. Gross G. The "basic" symptoms of schizophrenia. Br J Psychiatry Suppl. 1989:21–5.
8. Huber G, Gross G. The concept of basic symptoms in schizophrenic and schizoaffective psychoses. Recenti Prog Med. 1989;80:646–52.
9. Schultze-Lutter F. Subjective symptoms of schizophrenia in research and the clinic: the basic symptom concept. Schizophr Bull. 2009;35:5–8.
10. Gross G, Huber G. The history of basic symptom concept. Acta Clin Croat. 2010;49:47–59.
11. Vollmer-Larsen A, Handest P, Parnas J. Reliability of measuring anomalous experience: the Bonn Scale for the Assessment of Basic Symptoms. Psychopathology. 2007;40:345–8.
12. Vilagra R, Barrantes-Vidal N. Anomalías de la experiencia subjetiva en psicosis: concepto y validación empírica del modelo de los Síntomas Básicos. Salud Ment. 2015;38:139–46.
13. Klosterkötter J, Hellmich M, Steinmeyer EM, Schultze-Lutter F. Diagnosing schizophrenia in the initial prodromal phase. Arch Gen Psychiatry. 2001;58:158–64.
14. Parnas J, Raballo A, Handest P, Jansson L, Vollmer-Larsen A, Saebye D. Self-experience in the early phases of schizophrenia: 5-year follow-up of the Copenhagen Prodromal Study. World Psychiatry. 2011;10:200–4.
15. Parnas J, Henriksen MG. Disordered self in the schizophrenia spectrum: a clinical and research perspective. Harv Rev Psychiatry. 2014;22:251–65.
16. Sass LA, Parnas J. Schizophrenia, consciousness, and the self. Schizophr Bull. 2003;29:427–44.
17. Parnas J, Møller P, Kircher T, Thalbitzer J, Jansson L, Handest P, et al. EASE: examination of anomalous self-experience. Psychopathology. 2005;38:236–58.
18. Annas J. Aristotle on memory and the self. In: Nussbaum M, Rorty AO, editors. Essays on Aristotle's De Anima. Oxford: Clarendon Press; 1992. p. 299–311.
19. Descartes. The philosophical works. Cambridge: Cambridge University Press; 1967.
20. Kraepelin E. Dementia praecox und paraphrenie. Leipzig: Barth; 1959.
21. Bleuler E, Zinkin J. Dementia praecox or the group of schizophrenias. New York: International Universities; 1959.
22. Schneider K, Hamilton M. Clinical psychopathology. New York: Grune & Stratton; 1959.
23. Sass LA. Self-disturbance and schizophrenia: structure, specificity, pathogenesis (current issues, new directions). Schizophr Res. 2014;152:5–11.
24. Berze J. Die primäre Insuffizienz der psychischen Aktivität. Ihr Wesen ihre Erscheinungen und ihre Bedeutung als Grundstörungen der Dementia Praecoxund der hypophrenen Überhaupt. Leipzig: Franz Deuticke; 1927.
25. Mishara AL. Is minimal self preserved in schizophrenia? A subcomponents view. Conscious Cogn. 2007;16:715–21.
26. Cermolacce M, Naudin J, Parnas J. The "minimal self" in psychopathology: re-examining the self-disorders in the schizophrenia spectrum. Conscious Cogn. 2007;16:703–14.
27. Strawson G. The self and the sesment. In: Gallagher S, Shear J, editors. Models of the self. Thoverton: Imprint Academic; 1999. p. 483–518.
28. Scharfetter C. Introducción a la psicopatología general. Madrid: Morata; 1988.
29. Jaspers K. Psicopatología general. 4th ed. Buenos Aires: Beta; 1977.
30. Delgado H. Curso de psiquiatría. 2.ª ed. Lima: Imprenta Santa María; 1955.
31. Zahavi D, Parnas J. Phenomenal consciousness and self-awareness: a phenomenological critique of representational theory. J Conscious Stud. 1998;5:687–705.
32. Gallagher S. Philosophical conceptions of the self: implications for cognitive science. Trends Cogn Sci. 2000;4:14–21.
33. Nelson B, Parnas J, Sass LA. Disturbance of minimal self (ipseity) in schizophrenia: clarification and current status. Schizophr Bull. 2014;40:479–82.
34. Neisser U. Five kinds of self-knowledge. Philos Psychol. 1988;1:35–9.
35. Stanghellini G. Embodiment and schizophrenia. World Psychiatry. 2009;8:56–9.
36. Sass L. Madness and modernism: insanity in the light of modern art, literature and thought. Cambridge: Harvard University Press; 1992.
37. Nelson B, Yung AR, Bechdolf A, McGorry PD. The phenomenological critique and self-disturbance: implications for ultra-high risk ("prodrome") research. Schizophr Bull. 2008;34:381–92.
38. Grene M. Tacit knowing and the pre-reflective cogito. In: Langford TA, Poteat WH, editors. Intellect and hope: essay in the thought of Michael Polanyi. Durham: Duke University Press; 1968. p. 19–57.
39. Parnas J, Handest P. Phenomenology of anomalous self-experience in early schizophrenia. Compr Psychiatry. 2003;44:121–34.
40. Parnas J, Handest P, Saebye D, Jansson L. Anomalies of subjective experience in schizophrenia and psychotic bipolar illness. Acta Psychiatr Scand. 2003;108:126–33.
41. Sass LA, Byrom G. Self-disturbance and the bizarre: on incomprehensibility in schizophrenic delusions. Psychopathology. 2015;48:293–300.

42. Bernet R, Kern I, Marbach E. An introduction to husserlian phenomenology. Evanston: Nortwestern University Press; 1993.
43. Hur J-W, Kwon JS, Lee TY, Park S. The crisis of minimal self-awareness in schizophrenia: a meta-analytic review. Schizophr Res. 2014;152:58–64.
44. Klosterkötter J, Schultze-Lutter F, Gross G, Huber G, Steinmeyer EM. Early self-experienced neuropsychological deficits and subsequent schizophrenic diseases: an 8-year average follow-up prospective study. Acta Psychiatr Scand. 1997;95:396–404.
45. Parnas J, Cannon TD, Jacobsen B, Schulsinger H, Schulsinger F, Mednick SA. Lifetime DSM-III-R diagnostic outcomes in the offspring of schizophrenic mothers. Results from the Copenhagen High-Risk Study. Arch Gen Psychiatry. 1993;50:707–14.
46. Koehler K, Sauer H. Huber's basic symptoms: another approach to negative psychopathology in schizophrenia. Compr Psychiatry. 1984;25:174–82.
47. Nelson B, Thompson A, Yung AR. Not all first-episode psychosis is the same: preliminary evidence of greater basic self-disturbance in schizophrenia spectrum cases. Early Interv Psychiatry. 2013;7:200–4.
48. Raballo A, Parnas J. Examination of anomalous self-experience: initial study of the structure of self-disorders in schizophrenia spectrum. J Nerv Ment Dis. 2012;200:577–83.
49. Nordgaard J, Parnas J. Self-disorders and the schizophrenia spectrum: a study of 100 first hospital admissions. Schizophr Bull. 2014;40:1300–7.
50. Møller P, Haug E, Raballo A, Parnas J, Melle I. Examination of anomalous self-experience in first-episode psychosis: interrater reliability. Psychopathology. 2011;44:386–90.
51. Haug E, Øie M, Andreassen OA, Bratlien U, Raballo A, Nelson B, et al. Anomalous self-experiences contribute independently to social dysfunction in the early phases of schizophrenia and psychotic bipolar disorder. Compr Psychiatry. 2014;55:475–82.
52. Nelson B, Thompson A, Chanen AM, Amminger GP, Yung AR. Is basic self-disturbance in ultra-high risk for psychosis ('prodromal') patients associated with borderline personality pathology? Early Interv Psychiatry. 2013;7:306–10.
53. Sass L, Pienkos E, Nelson B. Introspection and schizophrenia: a comparative investigation of anomalous self experiences. Conscious Cogn. 2013;22:853–67.
54. Sass L, Pienkos E, Nelson B, Medford N. Anomalous self-experience in depersonalization and schizophrenia: a comparative investigation. Conscious Cogn. 2013;22:430–41.
55. Heering HD, Goedhart S, Bruggeman R, Cahn W, de Haan L, Kahn RS, et al. Disturbed experience of self: psychometric analysis of the Self-Experience Lifetime Frequency Scale (SELF). Psychopathology. 2016;49:69–76.
56. American Psychiatric Association. Diagnostic and statistical manual of mental disorders, fifth edition. Arlyngton: American Psychiatric Association; 2013.
57. World Health Organization. The ICD-10 classification of mental and behavioral disorders. Clinical descriptions and diagnostic guidelines. Geneva: WHO; 1992.
58. Tsuang MT, Van Os J, Tandon R, Barch DM, Bustillo J, Gaebel W, et al. Attenuated psychosis syndrome in DSM-5. Schizophr Res. 2013;150:31–5.
59. Reddy MS. Attenuated psychosis syndrome. Indian J Psychol Med. 2014;36:1–3.
60. Mishara AL, Lysaker PH, Schwartz MA. Self-disturbances in schizophrenia: history, phenomenology, and relevant findings from research on metacognition. Schizophr Bull. 2014;40:5–12.