REVIEW ARTICLE

PARANOID DELUSIONS: A REVIEW OF THEORETICAL EXPLANATIONS

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Abstract
Objective: There are two general theoretical explanations for delusions, the deficit and the motivational. In the deficit approach, scientists have argued that delusions are the consequences of fundamental perceptual or reasoning deficits which cause the individual to misunderstand what is happening in the world. The second approach views delusions as serving a defensive, palliative function, as representing an attempt to relieve pain, tension and distress. *Methods:* The present review article is based on literature review about Paranoid Delusion theories. *Results and Conclusion:* This article reviews the most important theories in the above mentioned approaches and it has found that we need more studies to verify the results of these approaches. The deficits in reasoning ability for example, need more explanations to show how and why these deficits occur and cause persecutory delusions. In this article I suggest that there are basic cognitive impairments that lead to disturbances in the mental imagination. These disturbances result on the two cognitive deficits (two losses) and force a person to have delusional beliefs. This study is a qualitative study based on judgments of some cases which the researcher has had the opportunity to study. ***ASEAN Journal of Psychiatry, Vol.12(1), Jan – June 2011: XX XX.***

Keywords: **Persecutory delusion, paranoid delusion, mental imagination, problem solving method.**

Introduction

Delusions are defined as fixed false beliefs which are unfounded, unrealistic, and idiosyncratic [1]. These false beliefs are held despite the presence of evidence to the contrary [2]. It is "based on incorrect inference about external reality that is firmly sustained in spite of what almost everyone else believes and in spite of what usually constitutes incontrovertible and obvious proof or evidence to the contrary. The belief is not one ordinarily accepted by other members of the person's culture or subculture (e.g., it is not an article of religious faith)" [3].

Definitions of this sort have been criticized because it is not obvious, but what constitutes an ''incorrect inference'' or "incontrovertible and obvious proof or evidence" [4]. However, these definitions of delusions have a qualitative difference from normal beliefs. The delusional beliefs are false in that they are not justified by the evidence [5] and are held with unusual conviction, whose absurdity is manifested to others and which are not amenable to logic. These monolithic definitions also have been modified in the light of so many recent

phenomenological studies, which lead to now conceptualizations as "dimensional entities rather than categorical ones, lying at the extreme end of a “belief continuum” " [6].

On the other hand, "delusion is a key clinical manifestation of psychosis" [7] and with hallucination it constitutes first-rank symptoms in disorders of schizophrenia such as schizophrenia, schizoaffective disorder, and delusional disorder [8,9]. Although, the DSM- IV A criteria for schizophrenia may be met in the absence of delusional ideas [3] "delusions also occur in dementia, temporal lobe epilepsy, Huntington’s disease, Parkinson’s disease, multiple sclerosis, and traumatic brain injury" [9]. So delusions have been referred to as “the sine qua non of psychosis” in general [10] and for schizophrenia in particular [8].

According to the primary themes, delusions also can vary ranging from the bizarre to the moderate humdrum [9] and divided into more subsymptoms such as delusions of control, persecutory delusion, grandiose delusions, and delusions of reference. Grandiose and Persecutory (Paranoid) delusions have received more attention than other kinds of abnormal beliefs because they are very commonly observed in clinical practice [11].

These observations probably have some cross-cultural validity, for example Sartorius, and colleagues [12] present findings from a World Health Organization prospective study in ten countries of individuals with signs of schizophrenia making first contact with services (N=1379) show that the persecutory delusions are the second most common symptom of psychosis, after delusions of reference, occurring in almost 50% of cases. Zolotova and Brune [13] compared between two samples of German and Russian patients with delusions of persecution, and they found (57.1%) from German patients and (53.44%) from Russian patients were classified correctly on the basis of the model for " identity of persecutors." Jorgensen and Jensen (14) found that 37 of 88 deluded patients had persecutory beliefs. These findings show that the persecutory delusions have high prevalence rates among patients of schizophrenia, and it shows the importance of studying this phenomenon.

Theories of Paranoid Delusions

We can distinguish between two general classes of theoretical explanation for delusion: the deficit and the motivational [11,15,16]. In the deficit approaches, scientists have argued that "abnormal beliefs are the consequences of fundamental perceptual or reasoning deficits which cause the individual to misunderstand what is happening in the world, whereas, others have held that they are motivated beliefs — beliefs that despite their apparent bizarreness serve some intra-psychic function for the individual" [11].

The deficits theories involve the notion of deficits or defects, which view delusions as the consequence of fundamental cognitive or perceptual abnormalities, ranging from wholesale failures in certain crucial elements of cognitive-perceptual machinery, to milder dysfunctions involving the distorted operation of particular processes.

Maher [17] has proposed that “delusions arise from the application of normal reasoning processes to abnormal

experiences" [18]. And the delusions reflect rational attempts to explain anomalous experiences. According to this view delusions arise when a patient applies normal logic to abnormal experience or perception; thus, someone who is hearing voices may deduce that a group of scientists have invented a special machine that "broadcasts" these voices [19]. Maher [20] thus emphasizes that delusional ideas spring from unusual internal experiences. He maintains that delusions do not arise via defective reasoning, but rather constitute rational responses to unusual perceptual experiences, which are, in turn, caused by a spectrum of neuropsychological abnormalities.

Maher highlights how hearing impairment, conceived as an anomalous experience, can lead to paranoid thoughts. Some studies found evidences about associations of paranoia and hearing difficulties in older adults [21], although this result is not always found [22,23]. In the recent study Freeman [24] concludes that "the anomalous experiences account is a difficult and under- researched area of study and it is frequently found in individuals with delusions but the nature of their relationship remains to be tested convincingly".

The current model of delusion formation and maintenance is known as the "two deficits" or "two factors" models, [25,26]. These models incorporate an empiricist perspective on delusion formation [27].

In addition to Maher's theory, Coltheart and colleagues [9] "identify perceptual anomalies that may potentially be involved in a series of other delusions. They note that such first deficit experiences are not sufficient for the development of delusions. Coltheart and his colleagues thus claim that Maher's account is incomplete, and invoke a second explanatory factor — a deficit in the machinery of belief revision". And it is "hypothesized that the individuals with this second deficit are unable to reject implausible candidates for belief, once they are suggested by first-factor perceptual anomalies" [9].

In the other deficit theory, David Hemsley and his colleagues have various hypotheses about logical reasoning. They suggest that "delusions are more than statements of experience, and involve an abnormal evaluative judgment arising from reasoning biases" [18]. And it is probable, delusions may arise through defective Bayesian reasoning [28].

Brennan and Hemsley [29] observed that paranoid patients perceived illusory correlations between pairs of words that had only appeared together at random, particularly when these words are related to their delusion. Hemsley and Garety [28] have suggested that "some delusions result from deficits in the ability to weigh new evidence and adjust beliefs accordingly" [19].

Both of these last accounts [17, 20, 15] suggest that deluded patients reach conclusions about the world in much the same way that scientists reach about theoretical beliefs, but assume that the processes leading from evidence to deduction are somehow dysfunctional in the psychotic patient [11], although evidence for reasoning ability impaired in deluded patients is far from convincing. Simpson & Done [16] found the performance by the deluded group was certainly impaired when compared with the depressed and non-psychiatric control groups though less

convincingly so when compared with the non-deluded schizophrenia group. The impairment shown by the deluded schizophrenia group seemed to occur at the initial stage of the reasoning task.

However, comparisons between paranoid and non-paranoid subgroups, while finding no evidence of gross reasoning impairment on the part of the paranoid subjects, have indicated specific cognitive styles. Nicholson and Neufeld [30] found impairments in specific reasoning ability in paranoid patients who have particular difficulty in extracting from their environment the stimulus properties necessary for informed responses. Interestingly, McKenna [31] found problems in semantic memory could lead to delusion formation. Studies, also, found deficits in semantic memory in deluded patients [32].

This field of theory has been supported from a number of resources, for example "there is a large body of evidence documenting the disruption of information processing in psychotic individuals leading to a variety of perceptual disturbances" [18]. Delusions also occur in a large number of medical and psychological conditions [33]. And those irrational beliefs can be induced in the general population under anomalous environmental conditions [18].

However, there is a growing body of evidence demonstrating reasoning and attribution biases in people with delusions [34, 35]. This attempt presents challenges for Maher's position. "Garety and her colleagues demonstrated that deluded people have a 'jump-to-conclusions' (JTC) reasoning style on a probabilistic reasoning task (the 'beads' task). They require less information before making a decision, and are more likely to revise their hypothesis in the light of disconfirmatory evidence. These results suggest that "limited amount of information represent sufficient evidence for a hypothesis to be accepted, thereby increasing the likelihood of inaccurate beliefs being formed hastily" [18].

The second type of delusional theories view delusions as serving a defensive, palliative function, as representing an attempt to relieve pain, tension, and distress. Such theories regard delusions as providing a kind of psychological refuge or spiritual salve, and consider delusions explicable in terms of the emotional benefits they confer. "This approach to theorizing about delusions has been prominently exemplified by the psychodynamic tradition with its concept of defense, and by the philosophical notion of self-deception. From a motivational perspective, delusions constitute psychologically dexterous (sleights of mind)" [39] deft mental maneuvers executed for the maintenance of psychic integrity and the reduction of anxiety [9]. The important theory in this field is Firth's theory [19]. He suggested the **"Inability to monitor the beliefs and intentions of others leads to delusions of reference, paranoid delusions, certain kinds of incoherence, and third person hallucinations (p.115)".**

He thinks the paranoid delusions and delusions of reference both occur because the patient has made incorrect inferences about the intentions of other people. Patients, with delusions of reference incorrectly, believe that other people are intending to communicate with them; this means a person with schizophrenia mistakenly labels an action as having an intention behind it. "Will patients with paranoid delusions unlike autistic individual, know that

other people have minds, but have lost the full capacity to make appropriate inferences concerning the contents of other people's minds" [36]. And they believe that other people are intending them harm, so other peoples' actions have become opaque and surmises that a conspiracy exists [24].

Frith [19, 37] proposes that symptoms of schizophrenia develop from newly acquired difficulties in a person's 'theory of mind' skills (ToM), and refers to the ability to understand mental states (beliefs, desires, feelings, and intentions) in the self or others. But he notes the (ToM) findings for paranoia may be more equivocal [37]. This is because ToM difficulties have been hypothesized to explain several symptoms of psychosis, the majority of studies have tested a group of people with schizophrenia and examined associations between symptoms of psychosis and ToM performance, but the majority results of these studies did not support ToM theory [24].

Discussion and New Suggestions

In this review the author focuses on two general classes of delusional theories, the deficit and the motivational, especially the theories of Maher, Hemsley, and Frith. According to Maher's theory [15,20] delusions arise when the individual applies normal logic to abnormal perception (Reasoning Deficits). But this view is not clear, so the author need more studies to verify it. We do not know how or why the reasoning deficits occur, thus the deficits in reasoning ability need more explanations about the primary causes of this deficit, thus I suggest that there are other basic cognitive impairments lead to reasoning deficits in deluded patients.

In the other hand, I do not think that the failure in the monitor of beliefs and intentions of others can lead to delusions of reference or paranoid delusions. The disturbing question here is how this process leads to forming fixed false beliefs. The paranoid beliefs are more fixed beliefs, and some paranoid beliefs are more false compared with social culture. So to get this type of delusions it is necessary to find an interaction between three etiological groups of factors. The first group contains the poor circumstances (this means: adverse life events, non-equality in educational opportunities, low economic level), upbringing dependent on suspicion, lower social support, repeated failure, low self-esteem, and anxiety. These variables lead to a cognitive –intellectual structure basics depend on suspicious thought or mind (second group). But all these variables in the first and second groups cannot be the causes factors of paranoid delusions until it has negitive effects on the mental imagination in the way related to delusional thinking style –type paranoid. And the contents of mental imagination conforms with patient's needs, motives, hopes, and fears. The mental imagination continue over and over in the person's thoughts. These cognitive processes lead to occupy his thought because he uses imagination as a method of problem solving and as an instrument to extenuate the painful daily events, such as with Bentall and colleagues [11] who understand persecutory delusions to be the result of a psychological defense against underlying negative emotion and low self-esteem.

The disturbances in this cognitive functions (Mental imagination, Thinking Style –paranoid type- and the problem solving method) will affect in the other cognitive processes, and the impairment

will be found with different conditions in the other cognitive operations such as: 1- confusion in the attention, concentration, and perception. 2- slow information processing and encoding, which delay of information processing for the new information and ignore or delete some of this information. So, depending on little information causes the insufficiency of ideas (information possessing deficits) which lead to the impairment in the reasoning processes (abnormal logic) and perception (false interpretation).

In order to solve her/ his daily problems, a deluded person will find the imagination as an easy way to have good feelings, to escape from the psychosocial problems, and to overcome the feeling of frustration, or to satisfy the hidden wishes [38]. This makes him return to imagination mostly so that he becomes preoccupied with mental imagination. Because of this preoccupation an individual may have two losses: the first is the loss of healthy interaction style with other people, especially with persons who criticize the patient's behavior. The Second loss is more important, because it's related to the ability of distinguishing between reality and imaginary ideas. This state occurs because he/she daily depends on the delusional thinking style which is used as problem solving method and because she/ he is daily suffering from preoccupation with mental imagination. Then, the patient will think that the imaginary (delusional) ideas are real, and will try to show to his friends and other people.

Finally, the logical conclusion is that interaction between the three groups of cognitive factors results on the two cognitive deficits (two losses) and force a person to have delusional beliefs.

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Received: 24 September 2010 Accepted: 7 February 2011