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Attributions for Hallucinations in Bipolar Affective Disorder

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Background: Attributions for hallucinations in the "schizophrenia" spectrum disorders have been subject to extensive investigation; however, in comparison very little is known about attributions for hallucinations in the bipolar disorders spectrum. **Aims:** This preliminary study is an attempt to investigate attributions for hallucinations in bipolar disorder with regard to prevalence, modality and mood state. **Method:** Forty participants were recruited from a larger randomized control trial into CBT for bipolar disorder and asked to provide information related to attributions for hallucinations both in and out of episode. Data was collected using a specially designed instrument based on the Belief about Voices Questionnaire (BAVQ). **Results:** Just under half of the participants reported experiencing true hallucinations during their illness. Participants tended to report visual hallucinations in mania and auditory hallucinations in depression. The vast majority of participants attributed hallucinations to illness when out of episode, and unlike in previously reported analyses of attributions for hallucinations in the schizophrenia spectrum, malevolent/omnipotent attributions were comparatively rare. **Conclusions:** Attributions for hallucinations in bipolar disorder may be clinically distinct from attributions previously observed in the schizophrenia spectrum, and CBT aimed at reducing the distress associated with these attributions may have to be tailored accordingly.

Keywords: Bipolar disorder, psychosis, hallucinations, visual hallucinations, attributions, mood state.

Introduction

Hallucinations in bipolar disorder have been the subject of little systematic research despite evidence that they are relatively common. In the most comprehensive study to

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date of prevalence of hallucinations in bipolar disorder (Baethge et al., 2005), records of all patients hospitalized at a Berlin teaching hospital between 1981 and 2000 were examined for evidence of hallucinations; in the bipolar disorder patients current hallucinations were reported as occurring in 11.8% of the sample. Observations of the phenomenology of bipolar disorder hallucinations have been summarized by Hammersley and Fox (2006).

Reports on clinicians' attributions for cause of hallucinations in bipolar disorder have a long history. Dr William Pargeter's classic 1782 study, *Observations on Maniacal Disorders*; contains case studies including a Mr Pascal who hallucinated a gulf of fire around him at all times, and two servant girls one of whom heard the voice of Christ, whilst the other "night and day saw the appearance of devils, sulphurous flames and other horrid images of the everlasting torture of the damned". Pargeter attributed the cause of these hallucinations in every case to overwork and the nefarious presence of Methodism.

Method

Participants

Forty participants contributed to the pilot study; the participants were a subgroup drawn from a larger national randomized control trial (*n*-253) into cognitive behavioural therapy for bipolar disorder (Scott et al., 2006.), Participants were approached by their own trial therapists, given information about this secondary study and asked to consent to participate. The first 10 participants to give consent to each of the four trial therapists were included. Participants were a subgroup drawn from a large scale randomized control trial, and as such we can be confident that the participants were correctly diagnosed with bipolar disorder. All participants were either in remission, or experiencing depression or low level hypomania at the time of interview. No participants were manic at the time of interview.

Procedure

Assessment of hallucinations. As there is no existing reliable document for the purpose of gathering information on hallucinations in bipolar disorder, the authors chose to adapt Chadwick and Birchwood's (1995) Belief About Voices Questionnaire. Hallucinations were defined as true or pseudohallucinations according to the established criteria set by the KGV assessment (Krawiecka, Goldberg and Vaughn, 1977).

Detailed subjective descriptions of hallucinatory experiences were recorded during the interviews and allocated into one of four categories reflecting previous observations in the literature related to hallucinations in bipolar disorder. The categories were: hallucinations caused by illness; hallucinations caused by a magical/spiritual source, or caused by an omnipotent malevolent source; hallucinations caused by stress; hallucinations caused as a punishment and any other source. In order to ensure that the attributions had been categorized correctly, a researcher unconnected with the study and with extensive experience of bipolar disorder (KT) reclassified the attributions. Inter-rater reliability was 90% (Kappa = 8.75).

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Results and discussion

Demographic information

Sixteen participants were men and 24 women, with a mean age of 42 (*SD* 10.02) and a mean age of illness onset of 26 (*SD* 8.35). Participants reported a mean of 6.85 (*SD* 3.39) episodes of depression and a mean of 4.79 (*SD* 3.54) episodes of mania/hypomania.

Prevalence, nature and appraisals of hallucinations

Nineteen of the 40 participants (47.5%) reported the experience of true hallucinations. Of these, visual hallucinations were most commonly reported; 17 out of 19 participants reported visual hallucinations, predominantly in manic or hypomanic states ($N = 16$). Conversely, of the 8 participants reporting auditory hallucinations, 7 reported that they did so when depressed.

All participants also reported pseudohallucinations (often pseudohallucinations taking a visual form in the manic prodrome), suggesting that rather than being discreet events, hallucinations may lie on a continuum with normal perception in a manner suggested by some cognitive models of psychosis (Bentall, 2003.) Frequencies are reported in Table 1.

Attributions

The most novel aspect of this pilot study concerns participants' attributions for hallucinations. First, the overwhelming majority of the participants held dual attributions for hallucinations; only one-fifth of participants reported that they attributed hallucinations to illness when in episode. However, all but two participants attributed hallucinations to illness when euthymic. A major difference between attributions for hallucinations in bipolar disorder and attributions for hallucinations in the schizophrenia spectrum concerns omnipotence/malevolence. In Chadwick and Birchwood's (1995) study of attributions for hallucinations in the schizophrenia spectrum, all participants reported their hallucinations to come from an omnipotent and malevolent source, and that this was a significant cause of distress. In this bipolar disorder sample only one-third of participants reported omnipotent/malevolent attributions in episode, and post episode only one participant continued to hold omnipotent/malevolent attributions. Interestingly, all but one of the participants who reported omnipotent/malevolent attributions also all reported auditory hallucinations, and reported hallucinating when depressed. This suggests that distress caused by omnipotent/malevolent attributions may be predominantly linked to the experience of hearing voices, or to the experience of depression or to both. Given the suggested association between auditory hallucinations and childhood trauma (Hammersley and Fox, 2006), it would be interesting for future research to investigate any possible associations between omnipotent/malevolent attributions and trauma history. Similarly, of the participants who held magical/extrasensory attributions for their hallucinations, all reported visual hallucinations, and all but one reported hallucinating when manic or hypomanic on at least one occasion. Details of content and form of hallucinations, and mood state in which hallucinations occurred, and attributions in and out of episode can be seen in Table 1.

The main weaknesses of this study are the small sample size and the reliance on retrospective descriptions of attributions for hallucinations, which may have been subject to recall bias and the lack of a pre-existing valid and reliable data collection instrument. However, the study does offer new and potentially fruitful data in research that may inform the growing desire to

Table 1. Subjective descriptions

Sex	Age	Subjective description	Mood state	Modality	Attribution in episode	Secondary attribution in episode	Attribution out of episode
Male	26	Saw faces and figures on the computer screen, the computer talked to me, many other visual and auditory hallucinations	Mania only	Auditory and visual	Magical/spiritual	None	Illness
Male	59	Visual hallucinations of religious figures, hear dead mothers voice talking to me in a soothing manner	Mania only	Auditory and visual	Magical/spiritual	Other (due to intense meditation)	Magical/spiritual
Female	21	Heard kind and critical voices, hears choral music, saw images of family with their wrists cut, saw the grass come alive	Depression and mania	Auditory and visual	Malevolent/omnipotent	Magical/spiritual	Illness
Male	35	Saw soldiers outside his room giving him orders, saw 'the ghost of the gray lady'	Mania only	Auditory and visual	Magical/spiritual	Other (drug induced)	Illness
Female	40	Heard a voice advising her to save money, saw visions of former work colleagues	Mania only	Auditory and visual	Other (unable to say)	None	Illness
Female	54	Saw the devil in her bedroom and men dressed in gray	Mania only	Visual only	Malevolent/omnipotent	none	Illness
Male	40	Heard the voices of two unidentified men instructing him to commit suicide	Depression only	Auditory only	Malevolent/omnipotent	None	
Female	38	Saw atom bombs falling from the sky and mushroom clouds rising up	Mania only	Auditory and visual	Illness	Magical/spiritual	Illness

Female	51	Saw giant spiders climbing the walls, heard many voices including the voice of her dead mother	Depression and mania	Auditory and visual	Malevolent/omnipotent	Other (punishment)	Malevolent/ omnipotent
Male	47	Saw the virgin Mary, heard the voice of his dead brother	Depression and mania	Auditory and visual	Magical/spiritual	Illness	Illness
Male	33	Heard his own voice coming from outside of the room making derogatory comments	Depression only	Auditory only	Malevolent/omnipotent	Magical/spiritual	Illness
Male	40	Saw faces of people he knew in mirrors and windows	Depression and mania	Visual only	Illness	Other (stress related)	Illness
Male	45	Saw flying saucers hovering over a river	Mania only	Visual only	Illness	None	Illness
Female	41	Heard critical voices of unknown men, saw insects all over the floor	Depression and mania	Auditory and visual	Malevolent/omnipotent	Magical/spiritual	Illness
Female	46	Heard her family outside the hospital crying and calling her name	Depression and mania	Auditory only	Malevolent/omnipotent	None	Illness
Female	35	Saw friends from the past sitting in front of her playing musical instruments	Mania only	Visual only	Magical/spiritual	None	Illness
Male	43	Saw a man turn a woman into a child, saw spirits and detached heads floating above him	Mania only	Visual only	Magical/spiritual	None	Illness
Female	56	Saw monsters, devils and gargoyles, also saw people from the past	Depression and mania	Auditory and visual	Illness	None	Illness
Female	43	Saw the figure of Christ offering advice	Mania only	Visual only	Magical/spiritual	Omnipotent/ malevolent	Illness

incorporate psychological therapies into the medical treatment of bipolar affective disorder; in particular, concerning models that place emphasis on interpretations and attributions of internal experiences in bipolar affective disorder such as the SPAARS model (Jones, Sellwood and McGovern, 2005).

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