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Metacognitions in proneness towards hallucinations and delusions

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Abstract

The objectives of the present study were to examine the degree of co-existence of hallucinations and delusions in the nonclinical population. In addition, we wished to investigate the role of metacognitions in hallucinations and delusions. Finally, we explored the relative roles of positive and negative metacognitive beliefs in proneness to hallucinations and delusions. Three hundred and thirty-one nonclinical participants completed instruments assessing: hallucination-proneness (Launay–Slade Hallucinations Scale; LSHS), delusion-proneness (21-item version of the Peters et al. Delusions Inventory; PDI-21) and metacognitive beliefs (Meta-Cognitions Questionnaire; MCQ). Participants were successively grouped according to their scores on the LSHS and the PDI-21. Results revealed that hallucination-proneness was positively and significantly associated with delusion-proneness. Furthermore, hallucination-prone and delusion-prone participants scored significantly higher on some sub-scales of the MCQ compared to non-prone participants. Finally, multiple regression analysis revealed that positive and negative beliefs were good predictors of proneness towards hallucinations and delusions.

Keywords: Hallucinations; Delusions; Positive symptoms; Metacognition; Continuum hypothesis; Metacognitive beliefs

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Introduction

A number of studies with psychotic patients have shown that positive psychotic symptoms (hallucinations and delusions) often co-exist (Bilder, Mukherjee, Rieder, & Pandurangi, 1985; Liddle, 1987; Peralta, de Leon, & Cuesta, 1992; Mortimer et al., 1996). However, studies have not adequately examined the degree of co-existence of these symptoms in nonclinical samples. For example, Verdoux et al. (1998a) found that, in addition to endorsing items on a measure of delusion-proneness, 16% of their nonclinical participants also reported that they had experienced hallucinations during their lifetime. The evaluation of hallucinations in Verdoux et al., 1998a, however, was only based on three single items (compared to 21 items that assessed delusion-proneness), which furthermore only assessed auditory hallucinations. More recently, Johns, Nazroo, Bebbington, and Kuipers (2002a) found an association between reports of hallucinations and other psychotic experiences based on the Psychosis Screening Questionnaire (Bebbington & Nayani, 1995); however, only two items concerning hallucinations were included in this study.

Evidence of the co-existence of hallucinations and delusions suggests that these two symptoms may share common ground in terms of the psychological factors underlying their presence. Disturbances in the regulation of cognition have been put forward as factors modulating positive psychopathological symptoms (Bentall, 1990; Frith, 1992; Morrison, Haddock, & Tarrier, 1995; Garety, Kuipers, Fowler, Freeman, & Bebbington, 2001; Morrison, 2001). In particular, Morrison et al. (1995) suggest that hallucinations, in addition to other positive symptoms such as delusions, are likely to be associated with metacognitive beliefs. Metacognitive beliefs are beliefs that are linked to the interpretation, selection and execution of particular thought processes. This may include beliefs about thought processes (e.g. ''I do not trust my memory''), the advantages and disadvantages of various types of thinking (e.g. ''I need to worry, in order to work well'', ''I could make myself sick with worrying'') and beliefs about the content of thoughts (e.g. ''It is bad to think certain thoughts'') (Morrison, 2001). According to Morrison et al. (1995), metacognitive beliefs that are inconsistent with intrusive thoughts (e.g. ''Not being able to control my thoughts is a sign of weakness'', ''I cannot ignore my worrying thoughts'') lead to their external attribution as hallucinations. Furthermore, it is argued that such a misattribution is maintained because it reduces cognitive dissonance. When the occurrence of intrusive thoughts does not comply with the person's metacognitive beliefs, an aversive state of arousal results (cognitive dissonance), which the person tries to escape by externalising the intrusive thoughts (resulting in hallucinatory experiences), thus maintaining consistency in his/her belief system. For instance, based on Morrison et al.'s (1995) view, a person who believes that one should control all thoughts yet at the same time frequently experiences uncontrollable thoughts would tend to attribute these thoughts as stemming from something other than him or herself.

Morrison et al. (1995) also claim that their account extends to include other positive symptoms, such as delusions. Intrusive thoughts may be defined as repetitive thoughts, images or impulses that are unacceptable or unwanted (Rachman, 1978). A number of studies have found similarities in both form and content between intrusive thoughts, on the one hand, and hallucinations and delusions, on the other hand. For instance, all three experiences are usually accompanied by subjective discomfort, are uncontrollable, and may be triggered by external precipitants such as stress and life-events. According to Morrison et al. (1995), these characteristics of intrusive thoughts highlight them as potentially useful in explaining positive symptoms, including