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Distress, omnipotence and responsibility beliefs in command hallucinations

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Abstract

Objectives: Command hallucinations are considered to be one of the most distressing and disturbing symptoms of schizophrenia. Building on earlier studies, we compare key attributes in the symptomatic, affective and cognitive profiles of people diagnosed with schizophrenia and hearing voices that do (n=77) or do not (n=74) give commands.

Methods: The study employed a cross-sectional design, in which we assessed voice severity, distress and control (PSYRATs), anxiety and depression (HADS), beliefs about voices (BAVQ-R) and responsibility beliefs (RIQ). Clinical and demographic variables were also collected.

Results: Command hallucinations were found to be more distressing and controlling, perceived as more omnipotent and malevolent, linked to higher anxiety and depression, and resisted more than hallucinations without commands. Commanding voices were also associated with higher conviction ratings for being personally responsible for preventing harm.

Conclusions: The findings suggest key differences in the affective and cognitive profile of people who hear commanding voices, which have important implications for theory and psychological interventions.

Keywords: hallucinations; commands; omnipotence; responsibility; distress

Practitioner Points

1. Command hallucinations are associated with higher distress, malevolence and omnipotence.
2. Command hallucinations are associated with higher responsibility beliefs for preventing harm.
3. Responsibility beliefs are associated with voice-related distress.
4. Future psychological interventions for command hallucinations might benefit from focussing not only on omnipotence, but also on responsibility beliefs, as is done in psychological therapies for obsessive compulsive disorder.

Limitations

1. The cross sectional design does not assess issues of causality.
2. We did not measure presence or severity of delusions.

Introduction

Auditory hallucinations, or voices, are reported by approximately 70% of people with a diagnosis of schizophrenia (Thomas et al., 2007) and are often associated with high levels of distress and behavioural disturbance (Birchwood & Chadwick, 1997). Voices that command harm to self or others (command hallucinations: CHs) are postulated to be particularly distressing and disturbing (Birchwood et al., 2014). However, relatively few studies have compared the experience of people hearing voices with or without commands. Two early studies found individuals with CHs reported more negative voice content (Rogers et al, 1990) and poorer coping with voices (Romme et al., 1992) than those hearing voices without commands. Mackinnon et al (2004) compared the phenomenology of voices in those with (n=130 reported commands "sometimes" or "often") or without (n=47) commands. Voice content and tone and the hearer's emotional reaction ('feelings evoked') were assessed by presenting lists of adjectives and asking participants to endorse those which applied to their voice hearing experience. For voice content, CHs were rated as more abusive, obscene, changeable, derogatory, threatening and critical (there were no differences on the following content descriptors: persecutory, helpful, guiding, intrusive, affirming, accusatory or inspiring). For voice tone, CHs were rated as more harsh, angry, crackly, authoritative, bossy, menacing and malicious (there were no differences on the following tone descriptors: gentle, muted, muffled, indistinct/fuzzy, sharp, loving, kind, friendly or quiet). For feelings evoked, hearers of CHs reported feeling more terrified, hopeless, anxious, agitated, frightened and out of control (there were no differences on the following feelings evoked descriptors: irritated, helpless, angry, comforted, not alone, reassured, depressed, excited, intruded upon, overwhelmed, unconcerned, confused, inspired, sad or happy). There are limitations of using endorsement of single words to assess

complex emotions and the present study uses, for the first time, a validated measure of anxiety and depression to test for differences in distress between hearers of voices with or without commands.

Chadwick and Birchwood's (1994) cognitive model of voices argues that distress and behavioural disturbance reflect not only voice form and content, but also beliefs, especially appraisal of voices as malevolent and omnipotent. As with all 'delusions', beliefs about voices are both reactions to and attempts to make sense of unusual experiences (Chadwick & Lowe, 1994). Research has shown that beliefs about voices are strongly associated with voice distress, coping behaviour and depression; and are only 'partly understandable' by reference to voice content (Birchwood & Chadwick, 1997). Therefore, in order to understand distress and disturbance associated with command hallucinations, it is vital to explore the meaning given to the experience, as well as form and content. Applying Chadwick and Birchwood's (1994) model, if command hallucinations are found to be more distressing, then this should be associated with higher perceived voice power and malevolence and not simply reflect differences in voice form and content.

Where voices command harm to self or others, alongside beliefs about voice power and malevolent intent, responsibility beliefs are also likely to be important determinants of distress. Responsibility beliefs are of central importance in cognitive models of obsessive compulsive disorder (OCD: Salkovskis et al, 2000), where it is a strong sense of personal responsibility for preventing harm which drives attempts to neutralise intrusive thoughts. There is emerging evidence that responsibility beliefs may be of transdiagnostic importance (e.g. Tolin, Worhunsky & Maltby, 2006), and one study suggested conviction in responsibility beliefs in people with a diagnosis of schizophrenia were comparable to levels in those with a

diagnosis of OCD (Luzon et al., 2009). In relation to command hallucinations, personal responsibility for preventing current or future harm is likely to be a key concept – that is, the more a person feels personally responsible for preventing harm, the more distressing it is likely to be to have omnipotent voices that command just this. Research has yet to examine responsibility beliefs in individuals with a diagnosis of schizophrenia and hearing voices; nor has research explored differences in responsibility beliefs in command versus non-command groups.

The main objective of the present study was to build upon and extend existing understanding of the emotional and cognitive impact of command hallucinations. Data are presented from 151 patients with a diagnosis of schizophrenia and experiencing current auditory hallucinations either with (n=77) or without (n=74) commands. The present paper makes three unique contributions. Firstly, validated measures are used to understand the impact of command hallucinations on levels of depression and anxiety, and on emotional and behavioural responses to voices. Secondly, the study uses the established Beliefs About Voices Questionnaire-Revised to profile the relationship between command hallucinations and beliefs about voices' omnipotence and intent (malevolence or benevolence). Thirdly, the study presents the first data on Responsibility beliefs and command hallucinations. It was hypothesised that people hearing command hallucinations would (1) experience higher anxiety, depression and voice-related distress, and report greater resistance and lower personal control (2) attribute higher malevolence and omnipotence to their voices, even after controlling for differences in voice form and content, (3) responsibility beliefs would be higher in those with command hallucinations than without, and in the command group only, responsibility beliefs would be associated with voice-related distress.

Method

Participants

The total sample consisted of 151 participants. Of these, 77 were experiencing current command hallucinations and 74 were experiencing hallucinations without commands, assessed via clinical interview. All participants met the following inclusion criteria: (1) aged 18 or over, (2) ICD-10 (WHO, 2009) diagnosis of Schizophrenia or Schizoaffective disorder (F20, 22, 23, 25, 28, 29), (3) voices duration > 6 months, (4) voice frequency at least once a week. Participants were recruited from two UK sites, London (n=83) and Birmingham (n=68). NHS and institutional ethical approval for the study was granted, and all participants gave written informed consent.

Instruments

To assess severity of hallucinations, the Psychotic Symptoms Rating Scale – Auditory Hallucinations Subscale (PSYRATS-AH, Haddock et al., 1999) was used. This consists of items that measure the dimensions of hallucinations (e.g. distress, negative content, control etc), and scores range from 0-44, with higher scores indicative of increasing severity. The scale is widely used for research into hallucinations and alpha in the current sample was acceptable (Cronbach's alpha = 0.76).

The Beliefs About Voices Questionnaire Revised (BAVQ-R, Chadwick et al., 2000) was used to assess key beliefs about voices, and contains five subscales: malevolence (score range 0-18), benevolence (0-18), omnipotence (0-18) resistance (0-27) and engagement (0-24). The scale has good test-re-test reliability (r=0.89) and internal consistency (Cronbach's alpha = 0.85). Reliability in the current sample was good (Cronbach's alpha = 0.83).

The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) was used to measure depression (7 items) and anxiety (7 items) symptoms. Participants rate each symptom based on how they were feeling in the past week, on a 4 point Likert scale (0-3), and scores range from 0-21.

Responsibility beliefs were assessed using the conviction subscale of the Responsibility Interpretations Questionnaire (Salkovskis et al., 2000), which consists of 16 Beliefs items measuring belief conviction in specific interpretations regarding intrusive thoughts about possible harm. Higher scores indicate increasing responsibility, and Cronbach's alpha in the current sample was very good (0.93).

Data Analysis

Descriptive statistics were generated to summarise sample characteristics and t-tests and chi-squared were used to compare demographic characteristics between the two groups. Skewness and kurtosis values were computed for each variable, which all fell within acceptable bounds (≤2.58). t-tests were conducted to examine differences between groups with and without commands on the key study variables (PSYRATS, HADS, BAVQ-R & RIQ). Due to expected group differences in voice form and content (as measured by the following PSYRATS items, which were computed into a composite score: frequency, duration, location, loudness, and amount/degree of negative content), we conducted ANOVA analyses examining differences between the command and non-command group on the key study variables (BAVQ-R and RIQ), controlling for differences in voice form and content. Cohen's d values are reported to estimate effect sizes. Finally, Pearson's correlational analyses were conducted to examine relationships between responsibility beliefs and voice distress in the two groups separately.

Results

The mean age of the sample was 37.23 years (sd = 11.14, range 18-64), the majority were male (59%), of White ethnicity (50%), unemployed (76%) and with a diagnosis of Schizophrenia (55%). No significant differences were found between individuals hearing voices with and without commands in terms of: age (t=.09, p= .93), gender (x^2 = .36, p=.55), ethnicity (white vs non-white; x^2 = 4.65, p=.09), employment status (unemployed vs other; x^2=.29, p=.59), or diagnosis (Schizophrenia vs other; x^2=.13, p=.72).

Table 1 shows descriptive and inferential statistics for all study measures. As predicted, on the PSYRATS, individuals with command hallucinations reported significantly higher distress (both amount and intensity) and significantly lower control. Anxiety and depression were also significantly higher in the command group. BAVQ-R scores revealed commanding voices to be perceived as significantly more malevolent and omnipotent, and to be resisted more. RIQ data showed conviction in personal responsibility for preventing harm to be significantly higher in the command group. The cognitive model of voices proposes that meaning ascribed to voices is not simply a reflection of form and content. In order to test whether differences in voice content and form were directly responsible for the observed differences in beliefs, we conducted additional ANOVA analyses testing group differences on BAVQ-R and RIQ whilst controlling for differences in voice form and content on the PSYRATs. Differences between the two groups remained (BAVQ-R – Malevolence: F (1,108) = 7.89, p = .01, Omnipotence: F (1,108) = 22.23, p<.001; Resistance: F (1,108) = 12.09, p = .001; RIQ: F = 16.51, p<.001), suggesting that between-group differences in the form and content of the hallucinatory experience did not account for observed differences

between the command and non-command groups in relation to both beliefs about voices (BAVQ-R) and responsibility (RIQ).

Correlational analyses revealed a significant relationship between responsibility beliefs and voice distress in the command group (r=.46, p=.01), but not in the non-command group (r=.13, p=.48). Additional data on voice dimensions showed command hallucinations to be associated with higher scores on duration, loudness and amount and degree of negative content; the two groups did not differ on frequency, location, beliefs about origin ('insight'), or amount of disruption caused.

[Table 1 about here please]

Discussion

The current study shows that voices commanding harm to self or others were experienced as more distressing than those without such commands, and shows empirically for the first time using a validated measure, that commands are associated with higher anxiety and depression. Consistent with the cognitive model of voices (Chadwick & Birchwood, 1994), voices commanding harm were also experienced as more controlling, more malevolent and omnipotent, and were resisted more. Crucially, these between-group differences in beliefs about voices remained when we controlled for differences in voice topography (as measured using PSYRATS). This finding is consistent with Chadwick & Birchwood's (1994) proposal that voice content and form are not directly responsible for beliefs about voices, distress and disturbance. Equally, it is important to recognise that the cognitive model of voices does not propose that voice form and content are irrelevant in shaping meaning and distress (Birchwood & Chadwick, 1997, p. 1350) – indeed, the present study offers a strong empirical illustration of how both are influenced by one key difference

in content, namely presence or absence of commands. The cognitive model of voices is thus proposing that it is the combination of the sensory voice and constructed meaning (perception) that renders distress and disturbance understandable (Birchwood & Chadwick, 1997).

The current study presents the first data on responsibility beliefs and voices in psychosis. Mean score on the RIQ in the command group (65.45) was considerably higher than published reports in OCD samples (e.g. mean of 49.46 in Salkovskis et al., 2000), and as predicted, responsibility beliefs were significantly higher in the group of voice hearers with commands than those without, demonstrating a large effect size. These findings are consistent with the suggestion that responsibility beliefs might be of transdiagnostic importance (e.g. Tolin et al, 2006; Luzon et al 2009). Furthermore, as predicted, within the sample of those with command hallucinations (but not those without), responsibility beliefs were strongly associated with distress – that is, the more an individual feels personally responsible for preventing harm, the more distressing it is to have voices that command harm. Given the exploratory finding that voice hearers are more willing to comply with commands to harm themselves than to harm other people (Beck-Sander et al., 1997), future research might explore if conviction in responsibility beliefs (and related distress) is higher in relation to commands to harm others than commands to self-harm. Future psychological interventions for command hallucinations might benefit from focussing not only on omnipotence, but also on responsibility beliefs, as is done in psychological therapies for obsessive compulsive disorder. This may yield changes in distress, in addition to the critical reduction in compliance seen in earlier trials (Birchwood et al., 2014).

There are a number of limitations of the study that warrant consideration. The cross-sectional design cannot address causality, although it does allow specific inferences to be drawn about the cognitive, affective and symptom profile of command hallucinations. In addition, we did not measure the presence or intensity of delusions in the sample, which could have impacted on subjective appraisals of distress and responsibility (though this issue is complex because beliefs in a voice's omnipotence and intent are secondary delusions: Chadwick & Lowe, 1994, p. 362). However, we were able to consider other factors that might have explained between-group differences in beliefs about voices and responsibility, such as voice form and content, which were controlled for in our analyses. In spite of individuals with command hallucinations being notoriously difficult to recruit (Birchwood et al., 2014), the sample size is good and the study was adequately powered to detect group differences.

The present study increases understanding of the psychological impact of command hallucinations and supports efforts (see Birchwood et al., 2014) to develop psychological interventions targeting this highly distressing experience through working with key cognitions such as perceived omnipotence and responsibility beliefs. In parallel, it is important to keep in mind that malevolent, powerful voices *without* commands are also distressing, and associated with considerable therapeutic need – a point reinforced by the finding in the present study that in terms of disruption in day-to-day life, the command and no-command groups did not differ.

Table 1. Descriptive (mean) and inferential statistics for all study measures.

	Command	**Non-Command**	**t statistic**	**P value**	**Effect Size (Cohen's d)**
PSYRATS (n=151)					
Frequency	2.83	2.58	1.28	.204	0.2
Duration	3.24	2.51	4.03	<.001	0.6
Location	2.58	2.50	.391	.697	0.02
Loudness	2.47	1.94	3.28	.001	0.5
Beliefs re: Origin	3.05	2.88	.966	.335	0.1
Amount Negative Content	3.43	2.17	6.12	<.001	0.9
Degree Negative Content	3.57	1.96	7.62	<.001	1.2
Amount of Distress	**3.25**	**2.26**	**5.08**	**<.001**	**0.8**
Intensity of Distress	**3.18**	**2.09**	**5.92**	**<.001**	**0.8**
Disruption	2.40	2.26	.919	.359	0.1
Control	**3.26**	**2.56**	**3.48**	**.001**	**0.5**
Total	33.02	25.96	6.45	<.001	1.0
HADS (n= 109)					
Anxiety	**13.18**	**9.61**	**3.12**	**.002**	**0.6**
Depression	**10.39**	**7.61**	**2.79**	**.006**	**0.6**
BAVQ-R (n=117)					
Malevolence	**13.22**	**7.94**	**5.37**	**<.001**	**0.9**
Omnipotence	**14.01**	**9.05**	**7.04**	**<.001**	**1.2**
Benevolence	3.32	3.88	.602	.548	0.1
Resistance	**21.24**	**14.33**	**5.24**	**<.001**	**0.9**
Engagement	5.23	5.75	.413	.681	0.08
RIQ (n=83)					
Conviction	**63.45**	**38.46**	**5.41**	**<.001**	**1.5**

Note. Bold variables highlight study hypotheses.

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