

# Visual Hallucinations in Older People: Appraisals but not Content or Phenomenology Influence Distress

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**Background:** A previous study (Gauntlett-Gilbert and Kuipers, 2005) has suggested that distress associated with complex visual hallucinations (CVHs) in younger adults with psychosis may more strongly relate to appraisals of meaning than to the content of the hallucination. However, visual hallucinations are most commonly seen in the disorders of later life, where this relationship has not been investigated. **Aim:** To establish if there is a relationship between appraisals of CVHs and distress in older, non-psychotic people with CVHs. **Method:** All variables were measured using a semi-structured interview and were compared between a high distress group ( $n = 16$ ) and a low distress group ( $n = 19$ ). **Results:** The high distress group rated their hallucinations as more malevolent and omnipotent, with greater negative implications for physical and mental health. There was no significant difference between groups on ratings of hallucination content (independently rated), frequency, awareness or control. **Conclusion:** Appraisals of CVHs are linked to distress.

*Keywords:* Appraisal, visual hallucination, Charles Bonnet, psychosis, distress, older people.

## Introduction

Around 2 million people in the UK experience repeated complex visual hallucinations (CVHs). These are involuntary, formed images of people, animals and objects that are seen

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in the absence of a corresponding external object (Collerton, Perry and McKeith, 2005). They commonly occur in younger people with psychosis but the large majority are seen in older people with physical illness, most frequently: delirium, eye disease, Parkinson's disease (PD) and dementia (Collerton et al., 2005). The quality and intensity of emotional reactions to CVHs vary. Some individuals find their hallucinations a pleasant or emotionally neutral experience, whilst for others they can be significantly distressing and disabling (Collerton et al., 2005). Greater understanding of the factors that influence distress can guide intervention.

### *Cognitive model of hallucinations*

In cognitive models of hallucinations, it is not primarily the content or form of a hallucination that is distressing, but the appraisal or meaning attributed to that experience (Chadwick and Birchwood, 1994). For example, two individuals may see a similar image of a person. One individual may appraise the image as benevolent (i.e. of good intent); believing the person to be kind and there as a protector, leading to feelings of reassurance. The other individual may appraise it as malevolent (i.e. of malicious intent); believing it to be evil and there to cause harm, leading to feelings of fear. These appraisals of intention may be accompanied by beliefs about how omnipotent the hallucination is, that is, how much power it has to influence events or outcomes for the person who is hallucinating.

These appraisal categories (i.e. benevolence, malevolence and omnipotence) were identified and described in auditory hallucinations by Chadwick and Birchwood (1994). These appraisal types are now widely used to categorize auditory hallucinations in both research and clinical settings.

There is little research that explores this relationship between appraisals and distress in visual hallucinations. A single study has investigated the relationship in adult participants aged 16–65 (mean age 41.5) with a psychiatric diagnosis (i.e. psychotic or depressive disorder; Gauntlett-Gilbert and Kuipers, 2005). Appraisals of perceived negative outcome had a significant positive relationship with distress, although appraisals of perceived control did not. The relationship with predicted negative outcome was stronger than the relationship between distress and independently rated CVH content and participant rated vividness. No studies have investigated appraisals and distress in the disorders of later life in which CVHs are particularly prevalent, such as PD and eye disease. The aim of this study is to establish if there is a link between appraisals of CVHs and distress in older, non-psychotic people with CVHs. The primary hypotheses were:

1. Distress in response to CVHs will be positively associated with appraisals of malevolence, omnipotence and perceived negative outcome, and negatively associated with appraisals of benevolence.
2. There will not be a relationship between distress and hallucination content, hallucination characteristics (such as frequency), and participant mood.

### **Method**

Favourable ethical opinion was provided by the NHS National Research Ethics Service Committee North East – Newcastle and North Tyneside 1.

### Participants

Thirty-five participants (24 male, 11 female) were recruited from local NHS and voluntary sector ophthalmology, dementia, older adult, neuropsychology and PD services (all services where CVHs are common). The majority of individuals were 65 or over, reflecting the age range in the services from which individuals were recruited (mean age 71). They had a range of diagnoses: PD ( $n = 12$ ), eye disease ( $n = 10$ ), PD and visual impairment ( $n = 3$ ), Lewy body dementia (LBD) ( $n = 2$ ), LBD and PD ( $n = 2$ ), brain damage and epilepsy ( $n = 2$ ), LBD and visual impairment ( $n = 1$ ), brain damage ( $n = 1$ ) and unknown cause ( $n = 2$ ). All participants were seen in their own homes in one or two appointments. The measures were administered in the same order.

### Measures

A semi-structured interview was constructed using relevant questions (i.e. those pertaining to CVH identification, CVH description, appraisals and emotional reactions) from the Appraisals and Reactions to Visual Hallucinations Interview (ARVHI; Dudley et al., 2012) and from the North East Visual Hallucinations Interview (NEVHI; Mosimann et al., 2008). The interview collected appraisals (of malevolence, benevolence, omnipotence, and perceived negative outcome) and levels of hallucination-associated distress (all rated on 10-point Likert scales ranging from “not at all” to “completely”, e.g. “not at all” malevolent or distressing). CVH content was determined by the interview, and then subsequently independently rated by 15 trainee clinical psychologists for how intrinsically distressing that content was. Descriptions of participants’ hallucinations were provided and trainees were asked to rate how upsetting/distressing, angry or afraid they thought they would feel if they saw that image. It was specified that trainees should rate the content alone and not base their response on any beliefs they may have about having a visual hallucination. Mean values for each participant hallucination were calculated.

The interview also assessed the frequency of CVHs (rated on a scale of 0–4 ranging from “never” to “everyday”), control over CVHs (i.e. “how often can you control the start, end, or content of CVHs”: each question was rated on a 1–5 point scale ranging from “never” to “always”, with a total category score range of 3–15) and frequency of awareness that image is not physically there (rated on a scale of 1–5, ranging from “never” to “always”).

General mood and anxiety was measured using the Hospital Anxiety and Depression Scale (HADS) (Zigmond and Snaith, 1983).

## Results

The distribution of self-reported hallucination-associated distress in the sample was strongly bi-modal, with peaks at 0 and 10. There were 19 participants scoring between 0–5 on the 0–10 distress scale who formed a low distress group, and 16 participants scoring between 6–10 who formed a high distress group. As the data were not normally distributed, non-parametric Mann-Whitney U tests were used to test the hypotheses. All tests were two-tailed and at the .05 significance level.

**Table 1.** Test statistics

	Low distress		High distress	
	Median	<i>M (SD)</i>	Median	<i>M (SD)</i>
Content	3.3	3.7 (2.1)	4.9	5.0 (3.1)
Frequency	3.0	2.3 (1.7)	3.0	2.5 (1.6)
Awareness	5.0	4.1 (1.6)	4.0	4.3 (1.7)
Control	3.0	4.1 (1.4)	3.0	3.6 (1.5)
Depression	5.0	5.4 (3.7)	7.0	6.8 (3.0)
Anxiety	3.0	4.5 (3.9)	5.5	6.0 (2.4)
Malevolence**	0.0	0.8 (2.5)	3.5	4.7 (4.9)
Benevolence	0.0	0.0 (0.0)	0.0	1.1 (3.0)
Omnipotence***	0.0	0.4 (1.2)	3.5	3.7 (3.4)
Negative outcome *	0.0	0.2 (0.9)	0.0	3.6 (4.3)

\*Mann-Whitney U tests significant at  $p < .05$ ;

\*\*Mann-Whitney U tests significant at  $p < .01$ ;

\*\*\*Mann-Whitney U tests significant at  $p < .001$

*Hypothesis 1. Distress in response to CVHs will be positively associated with appraisals of malevolence, omnipotence and perceived negative outcome, and negatively associated with appraisals of benevolence*

The high distress group appraised their VHs as significantly more malevolent and omnipotent than the low distress group. They also made significantly higher ratings of perceived negative outcome, which tended to relate to negative implications for physical and/or mental health. Effect sizes were all large. There was no significant difference in appraisals of benevolence (see Table 1).

*Hypothesis 2. There will be no relationship between distress and hallucination content, hallucination characteristics (such as frequency), and participant mood*

Most participants saw images of people; images of animals and objects were also common. There were no significant group differences between low and high distress groups with regards to how intrinsically distressing CVH content was as independently rated by trainee clinical psychologists, CVH frequency, CVH awareness, CVH control, or overall ratings of depression or anxiety (see Table 1).

## Discussion

Individuals with high hallucination-associated distress had significantly greater beliefs that their VHs were malevolent, omnipotent and would result in negative physical and/or mental health outcomes than those with low hallucination-associated distress. There were no significant group differences in hallucination content, hallucination characteristics, depression or anxiety. The results are in support of hypothesis 1 and of the cognitive model, which proposes that it is primarily the appraisal of the hallucination (rather than the hallucination itself) that is associated with distress. The findings suggest that cognitive-based interventions that target appraisals may be beneficial to individuals with distressing VHs. Within these

interventions, normalizing and decatastrophizing may play a role, although evidence from auditory hallucinations suggests a complex relationship between appraisals, behaviour and distress (Birchwood et al., 2014).

The interpretation of hypothesis 2 is limited by the small sample size. The study did not achieve adequate power with which to fully interpret the non-significant findings and type II error cannot be ruled out. That is, group differences in hallucination content, hallucination characteristics, depression and anxiety, may have reached significance in a larger sample.

Benevolence was not negatively associated with distress as expected. In fact, individuals in the high distress group tended to appraise their CVH as more benevolent. This might suggest that the association between appraisals and distress is not as straightforward as making an interpretation and experiencing a corresponding emotion. In the low distress group, the majority of participants reported no distress and did not appraise their CVHs as either positive or negative, perhaps suggesting that they had a more neutral and accepting approach. It may be that there are relationships between appraisal types that moderate or mediate distress. For example, it might be that a hallucination that is appraised as being omnipotent could be distressing regardless of whether its intent is considered malevolent or benevolent. Another possibility is that there are other salient appraisal types. This could be elucidated via a more in-depth investigation of appraisals and individual context. In the current population there are numerous factors that could potentially influence appraisals, for example: the predominant aetiological factor, the prognosis, the treatment provided, the individuals' perceptions of illness, and reactions of family members.

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### Supplementary materials

To view supplementary material for this article, please visit <http://dx.doi.org/10.1017/S1352465815000727>

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