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Pleasurable auditory hallucinations

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Objective: The focus in auditory hallucination (AH) research is usually on the negative impact of the experience itself. There are practically no studies on whether voices can be perceived as pleasurable. The aim of the present study was to assess the frequency of voices as a pleasurable experience in a psychotic patient population.
Method: A total of 160 patients with AHs (89 schizophrenia and 17 other psychoses) were assessed with the psychotic symptom rating scale (PSYRATS) for AHs, including an added item on whether the experience was pleasurable.
Results: Twenty-eight patients (26%) reported the voices as a pleasurable experience and 10 of them did so frequently. Pleasurable hallucinations showed negative associations with amount and intensity of distress, degree of negative content and loudness. Positive associations were apparent with chronicity and perceived control over the voices.
Conclusion: Pleasurable hallucinations can be detected in a substantial proportion of patients, and cross validated with existing instruments.

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Key words: auditory hallucinations; psychosis; anxiety; chronic

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Introduction

Auditory hallucinations (AHs) are one of the most frequent and characteristic symptoms in patients with schizophrenia (1, 2) and in recent years, the interest in these phenomena has increased. Several structured instruments have been designed for the analysis of different phenomenological dimensions of hallucinations. Some of these scales were designed for studies in the general population (3, 4), some measure hallucinations in any perceptive modality (5, 6) and some are specifically designed for psychotic patients (7–10).

Despite their strong association with schizophrenia, many studies have shown that AH can also be measured in the non-psychiatric general population, with prevalence rates many times higher than all psychotic disorders combined (11–14). AH may be regarded as a dimensional phenomenon, ranging from subjects who are at ease with their AH and who are not identified as a patient, to individuals with a severe psychotic disorder who are tormented by intrusive voices. A similar phenomenon has been observed for delusions. Peters and colleagues explored the incidence of delusional ideation in New Religious Movements (NRM). They compared an NRM group (Hare Krishnas and Druids) with two control groups (non-religious and Christian), and a group of deluded psychotic inpatients on two delusion inventories. Individuals from the NRM group scored significantly higher than the control groups on all the delusional measures apart from levels of distress. They could not be differentiated from psychotic patients on the number of delusional items endorsed on the PDI or on levels of conviction, but they were significantly less distressed and preoccupied by their experiences (15). In a cross-cultural study of Saudi Arabia (SA) and the UK differences in the content of AH, much of the content of the hallucinations of SA patients was religious and superstitious in nature, whereas instructional themes and running commentary were common in the UK patients (16).

Given the fact that emotional response rather than the psychotic experience itself appears to differentiate between patients and non-patients, the differentiation between the hallucinatory phenomenon itself and the emotional experience that it provokes becomes an important object for study. For example, some studies have pointed out that the main effect of antipsychotic medication and cognitive therapy would be to reduce the anxiety that voices trigger rather than the experience of voices itself (17–21). However, it is also accepted that individual experiences of hallucinations may not

always be manifested in an anguished and negative way. Shergill et al. (22) make the point that there are few data about patients reporting the voices as pleasurable. Although it is unlikely that pleasurable hallucinations are very prevalent in patients with schizophrenia, and these types of hallucinations may be more common in the non-patient general population, there is nevertheless a need to also quantify and validate their existence in patient groups. Pleasurable voices may have an essential function in empowerment and ego-strength, and may therefore be useful in therapy (20, 21).

Aims of the study

The aim of the present study, therefore, was (i) to assess the frequency of voices as a pleasurable experience in a psychotic patient population and (ii) cross-validate the pleasurable aspect of the experience using established scales.

Material and methods

Subjects

A total of 140 out-patients or admitted patients from the area of Valencia, Spain, with a clinical history of hallucinations were studied. Nine could not be evaluated because they did not sign the informed consent form, seven because evaluation was not possible and 18 were excluded because it was not possible to confirm the presence of hallucinations. The final sample thus consisted of 106 patients, 32 (30.2%) women and 74 (69.8%) men. The ages ranged from 19 to 75 years (mean = 39.1; SD = 11.9), while ages of disorder onset ranged from 12 to 73 years (mean = 25.3; SD = 10.3). The diagnosis, according to DSM-IV criteria was: schizophrenia ($n = 89$; 83%), schizoaffective disorder ($n = 9$, 8.5%), major depression with psychotic features ($n = 3$; 2.8%), type I bipolar disorder ($n = 3$; 2.8%) and unspecified psychosis ($n = 2$; 1.9%). The mean duration of illness was 14.0 years (SD = 9.4).

Every patient was under antipsychotic treatment at evaluation time: 29 (27.4%) under typical antipsychotic treatment, 34 (32.1%) under atypical and 43 (40.6%) under combined treatment (typical and atypical). Every patient gave informed consent to participate in the research. The study was approved by the local ethics committee.

Procedures

General clinical data. Collected data were: diagnosis by DSM-IV criteria, course, age of onset, duration of illness, pharmacological treatment, use of illicit drugs and assessment of hallucinations (below). Retrospective data were collected from the patient and validated with data collected from clinical records, family members or guardian, and responsible psychiatrist in each case. Diagnoses were confirmed for every patient by a consensus meeting with the treating psychiatrist and the first and the second author of this article (Table 1).

*PSYRATS subscale for AHs (*9). This scale rates several characteristics of AH in 11 domains on a five-point scale: frequency, duration, location, loudness, beliefs about the origin of voices, amount of negative content, degree of negative content, amount of distress, intensity of distress, disruption to life and controllability of voices. The scale, designed to easily and comprehensively evaluate hallucinations has shown excellent psychometric properties, in both the English and the Spanish versions (9, 23).

Pleasurable experience and persistence of hallucinations. The PSYRATS scale does not include several variables that were of interest in the context of the present study: (i) the possibility of voices being pleasurable, and (ii) the presence of other kinds of hallucinations. Therefore, the following questions were added to the PSYRATS scale: (a) Are the voices ever experienced as a pleasurable experience? The possible answers were 'never', 'on occasion' or 'frequently'; (b) Are other kinds of hallucinations present (visual, tactile, olfactory)? Chronicity of hallucinations was defined as: (i) voices were not modified in any way by treatment over the course of a year, (ii) present at least once a day in the last year, and (iii) had tried at least two antipsychotics at doses equivalent to 600 mg/day of chlorpromazine in the last year.

Interviews were also recorded on tape to analyse any doubtful cases. Thus, the patients were evaluated by a psychiatrist with training in the assessment of AH (second author) and the first author performed re-evaluations in doubtful cases.

Statistical analysis was performed with STATA version 8 (24). Associations between pleasurable experience associated with AH (0 = none, 1 = occasionally/frequently) and the independent variables were expressed as odds ratios and their 95% confidence intervals.

Results

Hallucination scores obtained by PSYRATS were as follows: frequency [3.0 ± (SD) 1.2], duration (2.7 ± 1.3), location (2.5 ± 1.3), loudness (2.2 ± 1.0),

Table 1. Clinical characteristics as a function of pleasurable hallucinations presence

	No. pleasurable hallucinations ($n = 78$)	Infrequently pleasurable ($n = 18$)	Frequently pleasurable ($n = 10$)
Sex (M/F)	53/25 (67.9% M)	14/4 (77.8% M)	7/3 (70.0% M)
Age (range)	38.4 ± 11.4 (19–75)	37.6 ± 11.1 (25–71)	47.5 ± 14.7 (28–72)
Age of onset (range)	25.3 ± 9.9 (12–73)	24.4 ± 12.8 (15–70)	26.6 ± 10.2 (17–44)
Duration of illness (range)	13.0 ± 9.6 (0–42)	13.6 ± 6.5 (1–23)	20.9 ± 10.3 (8–42)
Presence of other hallucinations (%)	No = 52 (66.7) Yes = 24 (30.8) No val. = 2 (2.6)	No = 12 (66.7) Yes = 5 (27.8) No val. = 1 (5.6)	No = 6 (60.0) Yes = 4 (40.0)
Chronic hallucinatory (%)	No = 65 (83.3) Yes = 13 (16.7)	No = 11 (61.1) Yes = 7 (38.9)	No = 6 (60.0) Yes = 4 (40.0)
Relation to drugs (%)	No = 53 (78.7) Yes = 15 (21.3) No val. = 10 (12.8)	No = 9 (50.0) Yes = 7 (38.9) No val. = 2 (11.1)	No = 9 (90.0) Yes = 1 (10.0)
Diagnosis (%)	Schyzophr. = 67 (85.9) Schyzoaff. = 6 (7.7) Bipolar = 3 (3.8) Depression = 1 (1.3) Unspecif. Ps. = 1 (1.3)	Schizophr. = 15 (83.3) Schizoaff. = 2 (11.1) Bipolar = 0 Depression = 1 (5.6) Unspecif. Ps. = 0	Schizophr. = 7 (70.0) Schizoaff. = 1 (10.0) Bipolar = 0 Depression = 1 (10.0) Unspecif. Ps. = 1 (10.0)
PSYRATS (range)	30.8 ± 6.6 (15–41)	27.5 ± 5.8 (12–36)	23.2 ± 7.7 (16–38)

beliefs about origin of voices (3.1 ± 1.1), amount of negative content (2.5 ± 1.5), degree of negative content (2.4 ± 1.4), amount of distress (2.5 ± 1.4), intensity of distress (2.5 ± 1.3), disruption to life (2.8 ± 0.8) and controllability (3.2 ± 1.2). The total PSYRATS score was not associated with either age (Spearman $r = -0.05$, $P = 0.59$) or sex (OR = 1.02, 95% CI = 0.96–1.08). The small number of patients with diagnoses different from schizophrenia ($n = 17$) did not differ from the patients with schizophrenia in the total PSYRATS scores (OR = 0.99, 95% CI = 0.91–1.06) or in the subscale scores (data not shown).

Twenty-eight patients (26%) perceived the voices as pleasurable at least occasionally; in 10 cases the pleasurable experience of AH was very frequent. There were no significant associations between pleasurable perception and diagnosis (OR = 1.32, 95% CI = 0.42–4.22), age (OR = 1.02, 95% CI = 0.98–1.05), age at onset (OR = 1.00, 95% CI = 0.96–1.04) or sex (OR = 0.71, 95% CI = 0.27–1.89). However, patients having pleasurable hallucinations had significantly lower values on the total PSYRATS score (OR = 0.90, 95% CI = 0.84–0.96).

Twenty-four patients (22.6%) met the criteria for chronic hallucinations. Pleasurable AH were associated with chronicity (OR = 3.23, 95% CI = 1.23–8.49). Thirty-five patients (33.0%) had other types of hallucinations. Pleasurable AH were positively associated with other types of hallucinations, although this association was not statistically significant (OR = 2.21, 95% CI = 0.90–5.38).

Several PSYRATS scales were associated with pleasurable AH. Negative associations were found with amount (OR = 0.67, 95% CI = 0.49–0.92) and intensity of distress (OR = 0.71, 95% CI = 0.51–0.98), degree of negative content (OR = 0.64, 95% CI = 0.47–0.86) and loudness (OR = 0.54, 95% CI = 0.33–0.90) and a positive association existed with perceived control over the voices (OR = 1.48, 95% CI = 1.05–2.08). No associations were found with others variables.

Discussion

In order to illustrate the experience of pleasure associated with AH, a verbatim statement is given of a 63-year-old male patient with schizophrenia diagnosed 35 years ago:

> Did you ever stop hearing them?
>
> No, never, I hear them clearly, clearly. If I did not have them, what a boring old age I would have! Some day they will give me a mission.

The most relevant finding of our study was perhaps the fact that 28 of 106 patients experienced their voices as pleasurable, for 10 of which experience of pleasure was the norm and not the exception. The fact that in such a group the PSYRATS general scores were lower did not reflect the fact that those patients had fewer hallucinations, but rather that the negative component of the voices was much lower, given the fact that PSYRATS assesses negative experience associated with hallucinations. The fact that pleasurable AH were associated, albeit statistically imprecise, with greater probability of presence of hallucinations in other modalities also does not suggest lower overall level of severity of hallucinatory experience.

Honig et al. (25) compared the characteristics of voices in 18 patients with a diagnosis of schizophrenia, 15 with dissociative disorder and 15 non-patients. The characteristics of the voices were similar in the three groups except for the degree of control and the emotional experience they provoked. In every patient with schizophrenia and in 93% of patients with a dissociative disorder, the experience was negative in contrast to 53% in the non-psychiatric group. Davies and colleagues reported similar results for psychotic patients in a comparison with evangelical and control groups (26). In the present study, many, but not all patients with schizophrenia experienced the voices as negative. Several explanations are possible. Escher and colleagues (27) conducted a prospective 3-year study in 80 teenagers hearing voices. Thirteen teenagers developed delusions related to the voices at some time during the follow-up period. One of the factors related to delusional elaboration was the emotional tone with which the voices were initially perceived. In individuals whose voices were experienced as hostile, the development of delusions was more probable. The current data concur, in that presence of pleasurable voices was *not* associated with beliefs about the origin of voices. This suggests that a negative, but not a positive emotional experience could condition the subsequent course of psychosis in terms of delusional elaboration.

Seemingly at odds with this conclusion was the finding that presence of pleasurable AH was associated with chronicity and possibly with other hallucinations, suggesting poorer illness outcome. However, 'chronicity' of AH in the context of positive emotional appraisal and a greater degree of control can also be understood as a positive adjustment to experience of AH, through habituation and reappraisal processes, that the subject is motivated to maintain over time. The suggestion of such an adaptation later in the course of the illness is compatible with the observation of late improvement, in particular in the form of 'dampening' of positive symptoms, in the long-term course of schizophrenia (28, 29). The increased prevalence of hallucinations in other modalities associated with pleasurable AH, albeit statistically imprecise, may indicate that these subjects have had more lifetime exposure to experience of hallucinations, and therefore have had more incentive to develop adaptive coping mechanisms.

Another possibility is that in patients with pleasurable AH, voices were perceived as pleasurable, more controllable and associated with other perceptive anomalies from the beginning, suggesting the action of not a factor associated with duration of illness, but of a factor associated with individual intrinsic characteristics such as variation in coping, personality or mood. A longitudinal study that puts together all these variables would be necessary to confirm which hypothesis is most likely.

This study confirmed that many patients have persistent voices in spite of treatment. Since the advent of antipsychotic treatment, it is well known that positive symptoms persist in many patients. In a prospective study of 50 hospitalized delusional acute psychotic patients, Miller (17) found that in 28 cases (56%) hallucinations persisted at hospital discharge. The main contribution of that study was the suggestion that the antipsychotic effect on patients with schizophrenia is not an on-off switch phenomenon but in most cases is a qualitative change, with decreasing intensity, frequency and emotional impact. Although our study method was cross-sectional and retrospective, the data supports this hypothesis for chronic patients.

Most of the recent work on treatment of persistent hallucinations has been based on cognitive approaches (20, 30–33). These studies have been concerned with the detailed analysis of hallucinatory symptoms and, particularly, of its emotional repercussions (21, 34, 35) while correctly assuming that voices are usually distressing for patients. The present study shows that voices can be pleasurable, not only as isolated experiences in the general population (36, 37) but also among patients diagnosed as having a psychotic disorder. It would seem that this finding has therapeutic implications. For example, patients may have come to rely on their pleasurable voices and may be less motivated for change. Treating voices that are pleasurable may even be counter-indicated in some cases. Programmes like Hallucination-focused Integrative Treatment (20, 21, 32, 33) integrate these aspects. As coping training and medication compliance can be affected by the presence of pleasurable hallucinations, techniques should be modified to fit these patients' needs. Our data show less anxiety and more control over voices in these patients. Therefore, these issues may not be a primary need in their therapy, and techniques (psychoeducation, family therapy, cognitive-behavioural interventions) might focus on adjustment to daily life, perhaps with conservation of pleasurable hallucinatory experiences. The conservative approach would be to discuss the possibility of pleasurable AH with all patients before commencing pharmacological or psychotherapeutical treatment.

This study has several methodological limitations. Information about previous remissions was

collected on the basis of the patient's recollection although it was corroborated where possible by clinical records of the responsible psychiatrist and in many cases by a family member and/or caretaker. Sample selection among delusional patients excluded patients with complete remission, so hallucination persistence (and therefore hallucinations associated with pleasure) may have been over-sampled. Only a prospective follow-up study can overcome these methodological limitations and validate the reported data.

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