



## AN EXPLORATORY STUDY OF HALLUCINATIONS IN SCHIZOPHRENIA

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### ABSTRACT

**Background:** Hallucinations are one of the commonest symptoms seen in schizophrenia. The current study aimed to elucidate the types and content analysis of various hallucinations seen in patients with schizophrenia.

**Methodology:** This was a study that was designed in the routine clinical practice setting. This was a study that was conducted in a private psychiatric hospital in Mumbai. The nature and content of hallucinations in 306 patients with schizophrenia was analyzed. The data was tabulated and the results presented.

**Results:** The most common type of hallucinations were of auditory nature and amongst that a majority of patients heard voices of an unknown person. Visual hallucinations were less common followed by the other types of hallucinations.

**Conclusion:** The study was an exploratory study in the primary care setting to determine the type of hallucinations seen in patients with schizophrenia. Further studies with details and quantifiable measures are needed.

**KEYWORDS :** Hallucinations, Schizophrenia, auditory hallucinations, visual hallucinations.

### INTRODUCTION

Hallucinations are one of the commonest symptoms seen in schizophrenia and may be present in any sensory modality with the general incidence of such hallucinatory experiences being about 50-80% across all cases [1]. Auditory hallucinations are the commonest form of hallucinations seen followed by visual hallucinations. Visual hallucination may be seen occur in 10-15% patients with schizophrenia while the commonest of hallucinatory experiences are auditory being about 55-65% [2]. The pattern and form of auditory hallucinations is often very specific and related to the delusions that the patient may have. The most common of these are hearing voices of others. The voices have certain characteristics such that its grammatical form may be different and the voice may be someone not usually known to the subject [3]. The hallucinatory voices are known to intensify when there is no background noise or if the background noise is meaningless while they diminish when the subject is involved in conversations or if the subject distracts himself [4]. The regular occurrence of these voices even prompted researchers to consider them first rank symptoms such as voices arguing, voices speaking thoughts aloud and voices commenting on the subjects actions [5]. Visual hallucinations and their patterns are however less established and are very often of things that do not occur normally in this world [6]. Olfactory and gustatory hallucinations are rarer compared to most hallucinatory experiences but are still seen in schizophrenia [7-8]. The aim of the current study was to assess the types and content of hallucinations seen in patients with schizophrenia at a private tertiary care psychiatric centre.

### METHODOLOGY

The study was conducted on patients between the ages of 20-50 years admitted to a private psychiatric centre of an urban metropolis in India. All patients were diagnosed as Schizophrenia using the DSM-IV criteria [9]. Patients with hallucinatory experiences in their symptomatology were chosen for the study. The total number of patients screened for the study was 334. Out of these patients without definite evidence of hallucinations (n = 26) and patients with pseudo-hallucinations (n = 2) were excluded from the study. The number of patients thus included for the final analysis was 306. A questionnaire with reference to hallucinations was prepared and given to the patients. The time duration for answering the questionnaire was 30-45 minutes. All patients completed the questionnaire in one sitting and the study was cross sectional in nature. The data was analyzed using descriptive statistics and percentages.

### RESULTS

The most common form of hallucinations was auditory reported by

277 (90.52%) cases followed by visual hallucination seen in 32 (10.45%) of cases. The other forms of hallucinatory experiences were much rarer (Table 1). On analyzing the content of visual hallucinations God was seen by 22 (68.75%) of cases while bizarre visual hallucinations were noted in 10 (31.25%) cases. The hallucinations were seen both in day and night by majority of patients (Table 2). On analyzing the content of auditory hallucinations, amongst the voices heard an equal number of patients heard male and female voices with no sex preponderance. Most of the voices heard were of unknown people not known to the subject (n=221, 79.78%). Around 15.88% (n=44) claimed that the voice they heard was of God. When asked about the emotional tone of the voices a majority reported it as angry (n=144, 51.98%) while 22.38% (n=62) reported to be derogatory and abusive in nature. Around 8.3% (n=23) reported the hallucinations being pleasant and soothing (praises about them or some pleasant conversations they have had) while 4.33% (n=12) of the subjects reported musical hallucinations which were quite relaxing to them. All patients reported the perception of auditory hallucinations in both ears while 92.05% (n=255) reported the presence of hallucinations during both day and night.

### DISCUSSION

As per literature available it is well known that auditory hallucinations are the most common form of hallucinations seen in schizophrenia [10]. Seeing God is a very common visual hallucination in the Indian context where culturally people are more religious and often invoke God's blessings regularly through prayer. They also feel that God may talk to them or guide them in important matters. This is replicated in our study [11]. Visual hallucinations are seen in schizophrenia though they are commoner in organic syndromes [12]. Abusive and derogatory voices as found in our study are common findings in schizophrenia when delusions of a persecutory nature co-exist [13]. It has also been reported that a combination of vivid mental imagery and poor reality testing in schizophrenia predisposes the subject to experience auditory hallucinations [14]. Recent studies have delved into the details and have been able to elucidate a theory of development of hallucinations in schizophrenia although a detailed description of the same is beyond the scope of this paper [15]. Musical hallucinations are seen rarely in schizophrenia and a variety of psychiatric disorders. They are more common in organic psychiatric states [16]. It is well known that in schizophrenia hallucinations may occur at certain times of the day or when under predisposition to certain stressors, hence the same was assessed by us [16]. Hallucinations as a symptom warrants further exploration in patients with schizophrenia. The study was circumscribed to a subset of patients and did not use formal rating scales to assess the

severity and content of hallucinations but only used a semi-structured questionnaire. The study also did not look at disease and treatment parameters that may have influenced the development of hallucinations.

This was a study of an exploratory nature in the primary care setting to ascertain the content and types of hallucinations seen in patients with schizophrenia admitted to a psychiatric hospital. No correlates of the hallucinations have been studied and nor have they been studied with relation to the delusions present. This study was done keeping day to day clinical practice and the essence of descriptive psychopathology in mind.

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**Table 1 – Types of Hallucinations seen in the patients**

Types Of Hallucinations	Schizophrenia Patients (n = 306)	Percentage
Auditory	277	90.52%
Visual	32	10.45%
Gustatory	10	3.26%
Olfactory	11	3.59%
Tactile	12	3.93%

**Table 2 – Analysis of the Visual Hallucinations Seen in all cases**

Visual Hallucinations		Schizophrenia group (n = 32)	Percentage
Nature	Scenic	3	9.38%
	Bizzare	10	31.25%
	Sexual	4	12.5%
	Flashes of Light	4	12.5%
	God	22	68.75%
	Devils / Spirits	10	31.25%
Other Features	Past experiences	4	12.5%
	Continuity	10	31.25%
Time of the day	Day	7	21.88%
	Night	9	28.12%
	Both	28	87.5%

**Table 3 – Analysis of Auditory Hallucinations**

Hallucination Analysis		Schizophrenic patients (n = 277)	Percentage
Sex of the Voice	Male	223	80.5%
	Female	178	64.25%
Analysis	Parents / Relatives	55	19.85%
	Unknown	233	84.12%
	Mixed	66	23.83%
	God	44	15.88%
Emotions Expressed	Angry	144	51.98%
	Pleasant	23	8.3%
	Abusive	105	37.91%
	Variability	112	40.43%
First rank symptoms	Voices arguing	55	19.85%
	Commenting	66	23.83%
	Speaking thoughts	22	7.95%
Hearing noises	Noise	47	16.97%
	Musical	12	4.33%
	Mixed	22	7.95%
Other features	Commands	61	22.02%
	Both Ears	255	92.05%
	One ear	45	16.25%
	Past experiences	23	8.3%
	Continuity	66	23.83%
Time of the day	Day	33	11.92%
	Night	44	15.88%
	Both	244	88.08%

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