

A STUDY OF COPING WITH AUDITORY HALLUCINATIONS IN SCHIZOPHRENICS

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SUMMARY

The general orientation and activities involved in coping with auditory hallucinations were examined in 30 schizophrenics. Age, personality dimensions, duration of illness, position, loudness and pitch of the voice and interference with activities of patients by the voice were associated with the general orientation. Systematic coping behaviour was useful. Socio-economic status and degree of interference with activities were associated with the choice of useful orientation. Manipulation of arousal and control of attention were beneficial. Neuroticism, interference due to voice, emotional intensity during the voice, 'third person' voices and anticipation of voice were related to suicidal ideas.

The experience of auditory hallucination is stressful to many a schizophrenic. The stress is more if the voice is persistent inspite of drug therapy. Non-pharmacological methods of treatment should help such a patient. Each schizophrenic has his own style of coping with voices but only some patients are successful. Adequate knowledge of the useful coping strategies is necessary for developing non-pharmacological treatment methods. The finding of Falloon and Talbot (1981) was that the coping strategies of schizophrenics with good coping were not much different from the strategies of patients with poor coping but the patients with good coping applied their strategies with confidence and in a systematic way. This finding suggests that the schizophrenic should be properly oriented in his coping behaviour in relation to auditory hallucinations. The general orientation of the patient in his coping behaviour is different from his coping activities. Two patients whose activities are similar can be dissimilar in orientation. For example, tuning the radio on may be for escaping from the voice in one case and for suppressing the voice in another. A study of coping should include both orientation and activities of the subjects. Suicidal

ideation is part of coping behaviour. Persistent hallucinations are associated with suicidal ideas (Falloon and Talbot, 1981). Hence the variables related to suicidal ideas should be sorted out.

Several variables are associated with hallucinations. Psychoticism scores, anxiety prior to the voice, reality testing ability, noise-level of environment (Slade, 197^F), social status (Linn, 1977), associated delusions (Lewinsohn, 1970) and anticipation of the voice (Arieti, 1975) have been discussed. The details of hallucinations, interference with activities by voices and the details of treatment should be included in the study.

The present study aims at examining the variables associated with the effectiveness of and types of orientation and activities involved in coping with auditory hallucinations in schizophrenics and the variables associated with suicidal ideas in such schizophrenics.

MATERIAL AND METHODS

30 schizophrenics attending the out-patient department of the Institute of Mental Health, Madras were chosen for the study based on the following criteria.

1. Patient should be 'definitely schizophrenic as per criteria of Feighner *et al.* (1972).

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2. He/she should be currently having auditory hallucinations i. e. the last episode should have occurred within 24 hours prior to the interview.
3. He/she should be having verbal auditory hallucinations with or without non-verbal auditory hallucinations and/or hallucinations in other sensory modalities.
4. He/she should not have undergone psycho-surgery.
5. He/she should not have been treated with electro-convulsive therapy in the month prior to the interview.
6. He/she should be co-operative for interview and psychological testing.
7. He/she should be an urban resident.

The mean age of the sample was 35.2 years and standard deviation was 9.7 years. The mean duration of illness was 7.53 years and the standard deviation was 6.3 years.

An interview schedule was constructed and each patient was interviewed along with one or more family members in order to elicit reliable information.

Ray *et al.* (1982) described six themes of coping based on the individual's general orientation. Each theme had stronger and weaker versions. The weaker versions were given 1 score each and the stronger versions 2 scores each by the present author. The 6 themes were arranged in two dimensions viz. control-helplessness and acknowledgement of threat-disavowal of threat. The outline of the themes and their scores are given in the Figure. The sum of scores for rejection, control and resignation was the score for acknowledgement of threat. The sum of scores for minimisation, avoidance and dependency was the score for disavowal of threat. In order to assess the individual's leaning in acknowledgement of threat-disavowal of threat dimension, the difference between the two scores was taken into account (e. g.

FIGURE—Coping themes, their weaker stronger versions and scores

Acknowledgement of threat		
<i>Rejection</i> (Resistance-1) (aggression-2)	<i>Control</i> (Monitoring-1) (manipulation-2)	<i>Resignation</i> (Accepting-1) (giving up-2)
Control		Helplessness
<i>Minimisation</i> (Rationalising-1) (dismissing-2)	<i>Avoidance</i> (Selective-1) (blanket-2)	<i>Dependency</i> (Trusting-1) (leaning-2)
Disavowal of threat.		

acknowledgement score 3-disavowal score 2 = +1; acknowledgement score 2-disavowal score 3 = -1). The sum of scores for each pair of themes along control-helplessness dimension was calculated in order to assess the patient's leaning towards one end or other. To illustrate, the individual was considered to lean towards control if the scores for the 3 pairs of themes along control-helplessness dimension were 3 for rejection + minimisation: 2 for control + avoidance: 1 for resignation and dependency. The individual was taken to be leaning towards helplessness if the scores for the said 3 pairs of themes were 1 : 2 : 3 respectively. The usefulness of individual coping themes were assessed on 4 point scales (0-3 scores). Score 0 indicated uselessness. Score 1 was given if the patient could prevent or terminate the episode of voice occasionally and score 2 was given if he could do so majority of times without altering grossly the frequency of voice. Score 3 indicated prevention or termination of episodes of voice with some reduction in frequency. The number of useful and useless themes

reported by patients was one of the variables studied. Coping behaviour included the emotions, overt activities and covert activities during, outside and immediately prior to the voice. The emotional intensity during, and outside the voice was scored on 4 point scale i. e. 0-3 scores (Nil-Score 0; low-Score 1; Medium-Score 2; high-score 3). Reaction to content of the voice was differentiated from reaction to the phenomenon of voice. Suicidal ideas and anticipation of voice were recorded as part of coping behaviour.

Details of sex, religion, mother-tongue, family history of schizophrenia and presence of delusions related to hallucinations were recorded. The hallucination variables and their scores are given in Table-I. Number, variety and dosage of drugs, administration of electro-convulsive therapy and native treatment were recorded. Reality-testing ability was measured by F+% in Rorschach test as it is the best single indicator of reality-testing ability (Carr, 1975). For measurement of personality dimensions Eysenck's Personality Questionnaire (1976) was used. Socio-economic status was scored with the help of the scale devised by Gupta and Sethi (1978). Insight was measured with the help of Present State Examination Schedule (Wing *et al.*, 1974).

Psychological testing was done following the interview and each patient was engaged for more than 2 hours.

RESULTS

The sample was classified in different way and the resultant groups were compared for all the variables already mentioned. Only the statistically significant findings are reported hereunder.

In the first stage of analysis, the sample was classified based on the dimensions of acknowledgement of threat-

disavowal of threat and control-helplessness. The differences between scores for acknowledgement of threat and the scores for disavowal of threat were calculated. (score for acknowledgement of threat minus score for disavowal). The median of the differences was +2.5 and two groups were sorted out one on either side of the median i. e. the group with more acknowledgement of threat and less disavowal of threat ('Acknowledgement of threat group; N=15) and the group with more disavowal of threat and less acknowledgement of threat ('Disavowal of threat' group; N=15). In the control-helplessness dimension the leaning of each patient was taken into account as illustrated earlier. 18 patients leaned towards control ('Control' group) and 12 patients leaned toward helplessness group). The two dimensions were combined and four groups were sorted out viz. 'Acknowledgement of threat-control' (N=7), 'Acknowledgement of threat-Helplessness' (N=8), 'Disavowal of threat-Control' (N=11) and 'Disavowal of threat-Helplessness' (N=4). These four groups were compared among themselves for all the variables mentioned and differences were found in age, personality dimension, duration of illness, loudness and pitch of the voice, interference with occupation, position of voice and effect of hospital treatment. The figures are given in Table-II.

In the second stage of analysis variables related to usefulness of coping themes were identified. Among the individual themes analysed, manipulation, dependency and avoidance were reported to be useful but not in all cases. Those who found a particular theme useful were compared to those who did not find that theme useful for all the variables taken into account. Patients who found manipulation useful (N=9) reported more manipulative behaviour outside the hallucinatory episodes than

TABLE-I. *Hallucination variables and scores for certain variables*

No.	Hallucination variables
1.	Duration of hallucination
2.	Duration of each episode of hallucination
3.	Frequency : a) Number of episodes per day b) Number of hallucinating days per month
4.	Language—Number of languages of voice.
5.	Position of voice : a) within the body b) outside the body : i) within sensory range ii) outside sensory range.
6.	Time sense during the voice : a) fast movement b) slow movement c) usual movement
7.	'Speakers' : a) Total number of 'speakers' b) Number of 'speakers' per episode. c) Sex of the 'speaker' d) Social status of the 'speaker' : i) Higher than ii) lower than iii) Equal to that of the patient e) Knowledge of the 'speaker' i) known living ii) known dead iii) unknown iv) God.
8.	Content of the voice : a) Audible thoughts b) Speaking to the patients c) 'Third person' d) Other details.
9.	Provoking agents : a) Objects b) Persons c) Situations.
10.	Loudness of voice : (whisper-1 score; that of ordinary conversation-2; shouting-3)
11.	Pitch of voice : (Low-score-1; medium score-2; high-score 3)
12.	Clarity of voice : (incomprehensible-score 1; very clear-score 3; in between-score 2)
13.	Noise-level of the environment during the voice (low-score-1; average 2; high-score 3)
14.	Reality of the voice (using the eight qualities described by Aggernaes et al. 1976. Maximum positive score-3)
15.	Level of anxiety immediately prior to the voice (Nil-0; low-1; moderate-2; high-3)
16.	Interval between increase in anxiety level prior to the voice and appearance of the voice.
17.	Effects of physical illness (e.g. fever) on the voice : alteration in frequency etc.
18.	Effects of treatment on the voice (nil-0; reduction in frequency or duration of an episode or unpleasantness of content-1; reduction in two of the three mentioned-2; total suppression of voice-3)
19.	Presence of other hallucinations : a) non-verbal auditory b) in other sensory modalities
20.	Interference with activities by voice : a) Self-care Score-0 Nil b) Occupation Score-1 distraction without grossly hampering with activity. c) Social activities Score-2 distraction leading to delay in completion of act. d) Leisure time activities Score-3 act not completed.

TABLE -II. Comparison between groups classified as per dimensions of coping themes.

Variables	Groups of Patients		Statistical analysis		
	'A-H' (N=8)	'A-C' (N=7)			
Psychoticism scores	Mean 3.375 SD 0.744	6.8571 4.1805	t=2.33; p < .05		
Extraversion scores	Mean 6.5 SD 4.1748	12.2857 3.3022	t=2.94; p < .02		
Neuroticism scores	Mean 19.625 SD 4.2741	14.7143 3.8607	t=2.32; p < .05		
Duration of illness in years	Mean 11.75 SD 8.1416	3.8214 3.1909	t=2.41; p < 0.5		
	'D-H' (N=4)	'D-C' (N=11)			
Age in years	Mean 25.75 SD 6.2383	37.4545 9.5117	t=2.26; p < .05		
Loudness of voice	Mean 2.25 SD 0.9574	1.2727 0.4671	t=2.72; p < .02		
Pitch of the voice	Mean 2.75 SD 0.4999	1.6364 0.5045	t=3.79; p < .02		
	'A-H' (N=8)	'D-H' (N=4)			
Age in Years	Mean 40.375 SD 11.6734	25.75 6.2383	t=2.31; p < 0.05		
Extraversion scores	Mean 6.5 SD 4.1748	13.0 2.7080	t=2.80; p < 0.2		
Effect of hospital treatment	Mean 0 SD —	1 0.8165	t=3.65; p < 0.2		
	'A-H' (N=8)	'D-C' (N=11)			
Psychoticism scores	Mean 3.375 SD 0.744	6.2727 2.9014	t=2.74; p < .02		
Extraversion scores	Mean 6.5 SD 4.1748	12.1818 4.8542	t=2.67; p < .02		
Effects of Hospital treatment	Mean 0 SD —	0.9091 0.8312	t=3.07; p < .02		
Interference with occupation	Mean 1.625 SD 1.1877	0.5455 0.6876	t=2.51; p < .05		
	'A-H' (N=8)	'A-C' (N=7)	'D-C' (N=11)	'D-H' (N=4)	
Voices outside the body within sensory range:					
Cases with	4	1	7	4	X ² =8.48; p < .05
Cases without	4	6	4	0	

- 'A-H' = 'Acknowledgement of threat—Helplessness'
- 'A-C' = 'Acknowledgement of threat—Control'
- 'D-H' = 'Disavowal of threat—Helplessness'
- 'D-C' = 'Disavowal of threat—Control'

TABLE-III. Comparison between certain groups of patients

Variables	Groups of Patients			Statistical Analysis
	Manipulation	'Useful' (N=9)	'Not useful' (N=11)	
Manipulative behaviour outside voice;				
Cases with		7	2	$X^2=4.90; p < .05$
Cases without		2	9	
No. of useless themes	Dependency:	'Useful' (N=12)	'Not useful' (N=5)	$t=3.91; p < .01$
	Mean	1.0833	2	
	SD	0.2887	0.7071	
Effect of hospital treatment	Mean	0.9167	0	$t=2.54; p < .05$
	SD	0.7020	—	
Use of dependency in addition:	Avoidance:	'Useful' (N=9)	'Not useful' (N=10)	$X^2=6.36; p < .01$
	Cases with	2	9	
	Cases without	7	1	
Interference with social activities	'Manipulation useful' (N=5)		'Dependency useful' (N=8)	$t=2.50; p < .05$
	Mean	0	1.125	
	SD	—	0.991	
Interference with leisure time activity	Mean	0	0.875	$t=2.31; p < .05$
	SD	—	0.8345	
Socio-economic status scores	'Manipulation useful' (N=6)		'Avoidance useful' (N=6)	$t=2.43; p < .05$
	Mean	110	166.6667	
	SD	35.3126	45.0185	
Effect of hospital treatment	'Dependency useful' (N=11)		'Avoidance useful' (N=8)	$t=2.95; p < .02$
	Mean	1.0909	0.25	
	SD	0.7006	0.4629	
Interference with leisure time activity	Mean	1.0909	0.25	$t=2.12; p < .05$
	SD	0.9439	0.7071	
Neuroticism score	'Suicidal' (N=13)		'Non-suicidal' (N=17)	$t=2.11; p < .05$
	Mean	18.0769	14.0588	
	SD	3.8829	5.9631	
Intensity of emotion during voice	Mean	2.7692	2	$t=3.15; p < .02$
	SD	0.4385	0.7669	
Interference with social activity	Mean	1.3846	0.5882	$t=2.28; p < .05$
	SD	0.9608	0.9393	
Third person voice:				
Cases with		9	4	$X^2=4.54; p < .05$
Cases without		4	13	
Anticipation of voice:				
Cases with		9	4	$X^2=4.54; p < .05$
Cases without		4	13	

those who found this theme not useful (N=11). The activities of these patients were consumption of alcohol (5 cases), physical exercises (3 cases), meditation (1 case) and taking over-dose of prescribed neuroleptics (1 case). Those for whom dependency was useful (N=12) had used less number of useless themes (resignation, rejection and minimisation) in addition when compared to patients for whom dependency was not useful (N=5). Also the effect of physical methods of treatment was better for them. Those who were benefited by dependency were leaning more on God and physical methods of treatment and were praying regularly and taking the prescribed drugs in a ritualistic manner. Those who were not benefited by dependency were leaning on other persons including the President of India to whom one patient complained about the 'speakers'. Those who found avoidance useful (N=9) had less combination of dependency in comparison to those for whom avoidance was not useful (N=10). Patients who used the theme of avoidance were engaged in self-distraction i.e. diverting attention during and immediately prior to the voice and were trying to step up their leisure time activities. (e.g. music, reading, films). The figures are given in Table-III.

In the third stage of analysis the groups of patients employing the useful coping themes were compared among themselves for identifying the variables related to the choice of the useful theme. Four patients found both manipulation and dependency useful. After eliminating them those who found manipulation useful (N=5 i. e. 9-4) were compared to those who found dependency useful (N=8 i. e. 12-4). Interference with social and leisure time activities was less for patients who found manipulation useful. 3 patients found both manipulation and avoidance useful. After eliminating

them, patients who found manipulation useful (N=6 i. e. 9-3) were compared to those who found avoidance useful (N=6 i. e. 9-3). Patients who found manipulation useful were of lower socio-economic status. One patient found both dependency and avoidance useful. After eliminating him, patients who found dependency useful (N=11 i. e. 12-1) were compared to patients who found avoidance useful (N=8 i. e. 9-1). Those who found dependency useful reported better effects of treatment at hospital and more interference with leisure time activities. The figures are given in Table-III.

In the fourth stage of analysis, patients with suicidal ideas (N=13) were compared to those without (N=17). Patients with suicidal ideas had higher neuroticism scores, more intense emotions during the episodes of voices, more interference with social activities, more 'third person' voices and more anticipation of voices in comparison to patients without suicidal ideas. The figures are given in table-III.

DISCUSSION

Patients who used lesser number of coping themes reported better results. Also those who extended their manipulative behaviour outside the episodes of voice were benefited. Such findings supported the observation of Falloon and Talbot (1981) that systematic application of strategies led to better coping. Meditation, consumption of alcohol and extra dose of neuroleptics reduce the level of arousal. Physical exercises increase the arousal. Self-distraction was another useful method. Manipulation of arousal and control of attention as treatment methods had been discussed by various authors (Falloon & Talbot, 1981). Aggression was not reported to be helpful. Socio-economic status and

the degree of interference due to the voice were associated with the choice of the useful coping theme. These findings might be useful in re-orienting patients in coping with voices. The variables related to orientation in coping behaviour were related not only to hallucinations but also to the illness and the patient and the suggestion thrown by such findings was that only a global approach would be proper.

Physical method of treatment was reported to be more effective in those who depended on it and these patients did not differ from others in treatment variables, frequency of voice, interference due to voice etc. The better effect of treatment should have been the subjectivity the patients concerned.

That 13 out of 30 patients had suicidal ideas suggested that risk involved. The variables associated with suicidal ideas spoke against the general belief that the content of the voice was the major factor associated with suicidal intent.

Further studies are strongly indicated and studies in future should use larger series and should include symptoms other than delusions and also neurophysiological measurements. Follow up studies should be more informative.

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