

# Characteristics of Delusional Experience

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**Summary.** The characteristics of delusional experience were examined in a mixed group of 55 patients considered to be deluded; 11 belief characteristics were assessed by self-rating: conviction, preoccupation, interference, resistance, dismissibility, absurdity, self-evidentness, reassurance seeking, worry, unhappiness and pervasiveness. Only on level of conviction did no subject show a low score; on other dimensions there was considerable inter-subject variability. A principal components analysis indicated 4 components: distress, belief strength, obtrusiveness and concern. It is argued that delusions are most usefully regarded as multi-dimensional and, while characterised by conviction, vary considerably on other important dimensions.

**Key words:** Delusions – Delusional experience – Principal components analysis

## Introduction

Since the heyday of phenomenology in the late 19th and early 20th centuries, when Kraepelin (1899), Bleuler (1911) and, surpassingly, Jaspers (1913) noted in detail their patients' descriptions of the experience of psychosis, remarkably little has been published in English about the nature of delusions. The work of Jaspers has been embodied in current definitions (Garety 1985) so that if one takes a standard British (Mullen 1979) and American (American Psychiatric Association 1978) definition it appears that delusions are broadly accepted as having certain characteristics: (a) their content is regarded as false or fantastic; (b) the level of conviction is absolute or firm; (c) the beliefs are idiosyncratic within the context of the believer's subculture; and (d) they are maintained in spite of counter-proof or experience. Additional characteristics can also be found in certain definitions, e.g. Mullen regards delusions as experienced as self-evident and of great personal significance. However, problems have arisen in applying such criteria and, as long ago as 1969, Strauss suggested that a dichotomous classification of beliefs, into those that are delusions and those that are not, is inadequate. He argued that delusions may be better conceptualised as more (or less) extreme points along certain belief dimensions, such as, for example, the level of conviction.

This dimensional approach may also assist with the problem regarding the distinction between obsessions and delu-

sions. Mayer-Gross et al. (1969) described an obsession as "a mental event with a subjective sense of compulsion over-riding an internal resistance", but added that if the personality as a whole identifies itself with the idea, then it may be considered as a delusional idea. Mullen (1979) also noted that the resistance to an obsession may fluctuate and suggested that in such cases the phenomenon would only be called a delusion if the lack of resistance becomes not an occasional but a constant feature of the experience. The distinction between obsessions and delusions is thus recognised, in some cases, to be a matter of degree.

Recent developments in cognitive approaches to the modification of abnormal beliefs (Hartman and Cashman 1983; Hole et al. 1979) also made more apparent the need for fresh consideration of the nature of delusions across diagnostic categories. Pharmacological treatments focus on diagnosis as the determinant of medication choice without requiring detailed analysis of the delusion itself. Cognitive approaches, however, call for a detailed analysis of the abnormal belief (Rachman 1983) as a prelude to determining treatment approach.

Thus a reconsideration of the nature of delusions is timely. The issues presented above suggest a need to study delusions as phenomena which may vary along a number of dimensions rather than all-or-nothing phenomena. This latter view has not promoted attempts to characterise subgroups of delusions; it is hoped that a more dimensional view will assist this, with the possibility of detecting relationships to aetiology and outcome.

A recent study in the United States took a similar approach to that advocated here. Kendler et al. (1983) developed a rating scale to measure 5 dimensions of delusional experience with the aim of considering whether these dimensions would correlate with each other, and by factor analysis to discover whether a small number of factors extracted would provide an empirical basis for understanding the structure of delusional experience. The 5 dimensions were conviction, extension (the degree to which the delusional belief involves various areas of the patient's life), bizarreness, disorganisation and pressure (the degree of preoccupation and concern). These dimensions were found to be independent of each other, suggesting that delusions are indeed a multi-dimensional phenomenon; 2 postulated factors were extracted, involvement (cognitive and emotional) and organisation. This study was conducted in the United States with a sample of 52 subjects from a variety of diagnostic groups. The dimensions studied were drawn from the literature and the authors' clinical experience, and were observer- not self-rated. It is not

clear to what extent these findings can be generalised from the United States to Britain; in addition, in the literature more than 5 characteristics relevant to delusions can be identified. Thus, in the present study, a survey of 55 deluded subjects is described, in which 11 principle belief characteristics were assessed.

The purpose of this study was to describe the characteristics of a heterogeneous sample of delusions in British subjects, and to consider the relationships between these characteristics.

## Method

### Subjects

The subjects were 55 psychiatric patients of the Bethlem Royal and Maudsley Hospitals described as deluded, regardless of diagnosis, by the psychiatrists responsible for their care. Two points should be made here about the selection of the sample. Firstly, while it is possible that the structure of beliefs varies across diagnostic groups, this remains an empirical question, worthy of investigation. Secondly, to have made a more precise specification of 'deluded' in determining the sample, would have begged the very question under consideration, that of the nature of 'delusions'. The 55 subjects were referred to the interviewer (P.A.G.) on the grounds that they were deluded, aged between 18 and 65 years and were not known to be suffering from an organic condition. An additional 4 patients were referred: 3 refused to be interviewed and 1 was unable to complete the interview because of difficulties in concentrating on the questions. Of the 55 subjects seen, 9 were out- or day-patients and 46 were in-patients; 28 (50.9%) subjects were women and the mean age of the sample was 40.3 years (SD 15.9). Of the total sample 35 subjects were diagnosed as suffering from schizophrenia; this represents 63.6% of the sample. 3 subjects each (5.5%) were diagnosed as suffering from schizo-affective psychosis, depression, manic depression and hypomania. Finally, 8 subjects (14.5%) were of uncertain diagnosis or thought to have a monosymptomatic delusional psychosis. Of the 46 in-patients, 31 subjects (67.4%) were seen within the 1st month of their current admission and 90% had been in-patients for less than 6 months. However, 3 subjects had been in hospital for more than 18 months. The mean length of the current admission was 4 months (SD 9.7). In terms of contact with psychiatric services, for the total sample, the range stretched from less than 1 year for 8 subjects to 45 years for 1 individual, with the mean at 13 years (SD 11.2 years).

### Measures

(a) *Characteristics of Delusions Rating Scale.* A total of 11 belief characteristics drawn from the literature on abnormal beliefs were chosen for the scale. These were all characteristics which are capable of being assessed by the individual holding the belief, rather than by an observer. A visual analogue scale was devised with each characteristic represented on paper as a line which had at either end a brief description of the opposite extremes of the dimension. Thus for the characteristic conviction, at the end-points of the line were the words "believe absolutely" and "believe not at all", while for preoccupation, the extremes of the dimension were "thinking about it all of the

time" and "not thinking about it at any of the time, ever" (see Table 4 for scale). The subject was required to make a mark with a pen at any point on the line, to represent the extent to which that characteristic was perceived true of his/her belief.

The 11 characteristics were conviction, preoccupation, interference (in terms of identifiable influence on behaviour), resistance (in terms of not liking to think about the belief), the degree to which the belief is dismissible from the mind, absurdity, the extent to which the belief is self-evident, the degree to which reassurance is sought from others, the extent to which the belief causes the subject worry and unhappiness and, finally, the pervasiveness of the belief, in terms of the subject's ability to attend to other thoughts simultaneously. The direction of the items was varied on the scale to control for response acquiescence. Indeed, in the course of the interviews the interviewer was able to detect and correct 4 or 5 subjects who appeared to be assuming that the same direction applied to all items and were thus not attending fully to the task. No subdivisions were made on the line itself, however the scoring was done, with a template, on a scale of 0–10. For all items a score of 10 represented the highest degree of the assessed characteristic.

(b) *Wakefield Depression Inventory.* Each subject completed the Wakefield Depression Inventory (Snaith et al. 1971) a simple self-rating scale of depression.

(c) *Content of Delusions Categorisation.* The content of each delusion was assigned to 1 of 5 categories, modifying categories devised by Forgus and De Wolfe (1974). These categories were 'positive self' (e.g. I am Jesus Christ), 'negative self' (e.g. I am dementing), 'positive world' (e.g. the world is being purified through an invisible fire), 'negative world' (e.g. the end of the world is this month) and 'paranoid' (e.g. the Mafia are plotting to kill me).

(d) *Demographic and present state data* were collected from the responsible psychiatrist and the case notes.

### Procedure

The principal data gathering took place within the context of an interview (with P.A.G.) lasting 30 mins to 1 h. After the subject had consented to the interview he/she was asked if anything was "on his/her mind" or whether "anything unusual had happened recently to him/her". When necessary more specific probes were made with the help of information from the doctor, ward staff and case notes. Every subject interviewed was willing to talk about his or her delusions, given appropriate reassurances about confidentiality. Once the delusion was stated, the exact wording was discussed until the subject was satisfied with it. This was then written clearly at the top of the rating scale.

The subject was then given the rating scale and a pen, and with the interviewer sitting beside the subject, each item was explained, clarifications were given and the subject was invited to make a mark at a point along the line to indicate the degree to which the characteristic described represented his or her experience. Every effort was made to ensure that the subject was attending to and understood the items and thus responded accurately. Subjects were encouraged to take their time over their responses and were given the opportunity to describe to the interviewer their experiences and feelings. After completing the rating scale, subjects completed the Wakefield Depression Inventory.

## Results

### Demographic and Present State Data

Data from the psychiatrists and case notes revealed that 68% of subjects were regarded as fully deluded at the time they were seen while the other 32% were thought to be 'partially deluded' [following the Wing et al. (1974) definition]. A total of 49% were thought to experience auditory hallucinations and 18.5% were regarded as clinically depressed. Some 84% were being prescribed psychotropic medication, and 37% were thought to have shown a positive response to medication in the current episode; 62% were said to have stable delusions at the time of the interview.

### Wakefield Depression Inventory

Of the subjects, 60% achieved scores above the cut-off for depression on this scale; it is acknowledged by the authors of this scale that this is a less stringent criterion than for a diagnosis of clinical depression but rather represents a significant level of self-rated depressive symptoms.

**Table 1.** Characteristics of Delusions

Characteristic	Total group mean score	Total group SD	% subjects high scores	% subjects moderate scores	% subjects low scores
Conviction	9.1	1.8	80	20	0
Preoccupation	6.2	3.3	40	31	29
Interference	6.3	3.6	47	20	33
Resistance	7.8	3.1	69	15	16
Dismissibility	5.2	3.8	39	18	43
Absurdity	3.8	3.7	25	11	64
Self-evidentness	8.2	2.9	74	15	11
Reassurance seeking	3.6	3.1	21	21	58
Worry	6.8	3.7	56	19	25
Unhappiness	6.1	4.0	49	15	36
Pervasiveness	5.2	3.7	41	15	44

### Content of Delusions

Of the beliefs, 31% were on a 'positive self' theme and 25.5% on a 'negative self' theme; 5.5% were categorised as 'positive world' and only 2.1% were categorised as 'negative world'; finally, 36% were categorised as being on a paranoid theme.

### Characteristics of Delusions

Taking the responses of the whole group, the means and standard deviations for each characteristic are given in Table 1 (columns 1 and 2). However, since for some items some subjects characteristically scored at one end and others at the other end of a given scale, in columns 3 to 5 the percentage of subjects scoring high (8–10), moderate (4–7) and low (1–3) for the characteristic, are given.

The correlations between the characteristics were calculated using the Pearson Product Moment method and the resultant correlation matrix is given in Table 2.

A principal components analysis (SPSS, PA2) was then conducted on the 11 variables with orthogonal (varimax) rotation of components. Four components emerged as shown in Table 3 (loadings less than 0.4 have been excluded for the sake of clarity; an oblique rotation yielded the same 4 components with similar loadings).

### Relationships Between Belief Characteristics and Other Variables

While a small number of significant relationships between individual belief characteristics and, for example, diagnosis and depression ratings were found, a more informative analysis of the relationship between such variables is afforded by a cluster analysis method, in which subjects are grouped by their responses to the 11 variables, and these groups are studied to determine their relationships with the demographic and present mental state data. Associations between group membership and both psychiatrist diagnosed 'clinical depression' ( $\chi^2 = 6.7$ ,  $df = 2$ ,  $P < 0.05$ ) and self-rated depression (Wakefield Depression Inventory) ( $\chi^2 = 8.3$ ,  $df = 2$ ,  $P < 0.05$ ) were found. No clear association between diagnosis and group membership emerged however, although the number of diagnostic groups (5) and the sample size, reduced the power of the  $\chi^2$  test in this instance. The stability of the delusions ( $\chi^2 =$

**Table 2.** Correlations between characteristics

	Conviction	Pre-occupation	Interference	Resistance	Dismissibility	Absurdity	Self-evidentness	Reassurance	Worry	Unhappiness	Pervasiveness
Conviction	1.00	0.06	0.11	-0.04	-0.13	-0.33	0.32	-0.10	0.10	0.10	0.26
Preoccupation		1.00	0.28*	-0.03	-0.36**	0.00	0.27*	0.09	0.11	0.31*	-0.09
Interference			1.00	0.05	-0.06	-0.01	0.11	-0.05	0.12	0.16	-0.16
Resistance				1.00	-0.12	0.28*	-0.13	-0.07	0.38**	0.46**	-0.18
Dismissibility					1.00	-0.05	-0.11	-0.11	-0.11	-0.36**	0.32*
Absurdity						1.00	-0.49***	0.20	0.21	0.23	-0.22
Self-evidentness							1.00	-0.04	-0.06	-0.14	0.22
Reassurance								1.00	0.26	0.27*	-0.04
Worry									1.00	0.70***	-0.26
Unhappiness										1.00	-0.24
Pervasiveness											1.00

\*\*\*  $P \leq 0.001$ ; \*\*  $P \leq 0.01$ ; \*  $P \leq 0.05$

**Table 3.** Principal components analysis

	Variable	Loading	% Variance
Component 1 distress	Resistance	+0.53	44.7
	Worry	+0.72	
	Unhappiness	+0.83	
Component 2 belief strength	Conviction	+0.59	28.0
	Absurdity	-0.62	
	Self-evidentness	+0.67	
Component 3 obtrusiveness	Preoccupation	+0.87	15.0
	Dismissibility	-0.43	
Component 4 concern	Reassurance seeking	+0.85	12.3

**Table 4.** Characteristics of delusions rating scale

Name: \_\_\_\_\_

Date: \_\_\_\_\_

- Conviction*  
Believe absolutely \_\_\_\_\_ Believe not at all \_\_\_\_\_
- Preoccupation*  
Not thinking about it \_\_\_\_\_ Thinking about it \_\_\_\_\_  
at any time, ever all of the time
- Interference*  
Makes an enormous \_\_\_\_\_ Makes no difference \_\_\_\_\_  
difference to what I do to what I do
- Resistance*  
Very much like thinking \_\_\_\_\_ Do not like thinking \_\_\_\_\_  
about it about it at all
- Dismissibility*  
Cannot dismiss it at all \_\_\_\_\_ Can dismiss it very \_\_\_\_\_  
from my mind easily indeed
- Absurdity*  
Seems entirely sensible \_\_\_\_\_ Seems entirely senseless \_\_\_\_\_
- Self-evident*  
Seems completely \_\_\_\_\_ Seems utterly strange, \_\_\_\_\_  
obvious implausible
- Reassurance*  
Seek reassurance about it \_\_\_\_\_ Do not seek reassurance \_\_\_\_\_  
all of the time about it at all
- Worry*  
Thinking about it does not \_\_\_\_\_ Thinking about it makes \_\_\_\_\_  
make me worry at all me very worried
- Unhappiness*  
Thinking about it makes me \_\_\_\_\_ Thinking about it does \_\_\_\_\_  
very unhappy not make me at all unhappy
- Pervasiveness*  
Cannot think about other \_\_\_\_\_ Easy to think about it \_\_\_\_\_  
things at all when thinking about it same time

10.4,  $df = 4$ ,  $P < 0.05$ ) and the content of the belief ( $\chi^2 = 24.1$ ,  $df = 8$ ,  $P < 0.005$ ) were associated with group membership. This analysis will be reported elsewhere (Garety et al. in preparation).

## Discussion

Presented here are data from 55 subjects on key elements of delusional experience. Perhaps an important variable not assessed here is that of the bizarreness of the belief, however this is a characteristic which can only be observed and not self-rated and there are some difficulties with observer ratings. Kendler et al. (1983) failed to achieve satisfactory levels of inter-rater reliability (weighted kappa = 0.30) on this variable. Of those variables examined, it appears that the most characteristic feature of a delusion is a high degree of expressed conviction; 80% of subjects expressed high levels of conviction, and, alone of all the variables assessed, none expressed low levels. The responses of the subjects with respect to the other variables, however, demonstrated a considerable degree of inter-subject variability (see Table 1). For a number of the variables, in this sample of delusions it is clearly not accurate to suggest a characteristically high level: for preoccupation, interference, dismissibility, unhappiness and pervasiveness, while many subjects (39%–40%) did express high levels, many others (29%–44%) expressed low levels. It should be particularly noted that more than half the subjects showed high levels of resistance. However, perhaps more predictably, more than half of the subjects showed high levels of perceived self-evidentness and worry, and a low level of the perceived absurdity of the belief.

Thus it appears that delusions can, and do, take many different forms. Nearly all will be held with conviction, but in addition to this, some will be preoccupying, others not; some will be dismissible, others not; most will be resisted, while many will be worrying and associated with unhappiness. Most will not appear absurd and most self evident, and relatively few will generate reassurance seeking to any great extent. The two final variables, interference and pervasiveness were the two which the subjects in the structured interview reported to be most difficult to assess. Interference required an assessment not of the belief, but of associated actions, while pervasiveness required the subject to make an analysis of the degree to which his/her attention was taken up by thinking about the delusion. Interestingly, these variables did not correlate strongly with other variables, nor did they feature with high loadings in the principal components analysis. At this stage, therefore, it appears safest not to place too much weight on the role of these variables in the structure of delusions.

In distinguishing between obsessions and delusions, these data highlight an interesting point. It appears that delusions may often be characterised by resistance and sometimes (although apparently less often than obsessions, Stern and Cobb 1979) by perceived absurdity. While the precise meaning afforded resistance is important here, lack of resistance, as suggested by Mullen (1979) does not appear to be a hallmark of the delusion. The exact nature of the distinction between these two phenomena appears to warrant a study of its own.

Few strong relationships between these different key variables were found (see Table 2): the strongest were the negative correlation between perceived absurdity and self-evidentness ( $r = -0.49$ ,  $P < 0.001$ ) and the positive correlation between the worry and unhappiness associated with the belief ( $r = 0.70$ ,  $P < 0.001$ ). A number of other significant but low correlations between variables were found, however, in general it appears that these characteristics of delusions are relatively independent of one another. Kendler et al. (1983) reported that no 2 of their 5 dimensions correlated highly with each other,

they argued that none of their dimensions assessed the same basic phenomenon to any substantial extent, and thus that their results supported the hypothesis that delusions are multi-dimensional. The results of this study also support this contention.

This relative independence of most of the variables measured here also has implications for the assessment of delusions and of change in delusions. It is not sufficient to assess one or two elements only, since the key elements do not appear to be strongly related and may not change at the same rate. Kendler et al. also make this point, noting that Hole et al. (1979) found that individual dimensions of delusional experience often change independently of one another during the course of a psychotic episode.

However while individual variables are not, for the most part, strongly correlated, the principal components analysis generated 4 components, or groups of variables which clustered together, (see Table 3). The first component, labelled distress, had high loading on resistance, worry and unhappiness. The second, with high loadings on conviction, self-evidentness and, negatively, on absurdity, appeared to represent the belief strength. The third component, labelled obtrusiveness consisted mostly of high loadings on the degree of preoccupation and (negatively) of dismissibility, while the final component loaded mostly on reassurance seeking, and thus was labelled concern. The results of this principal component analysis suggested that there may be at least 4 processes which underlie these 11 elements of delusional experience. It is not possible, at this stage, to speculate on their clinical significance; however in assessing change in a delusion it may be valuable to assess at least 3 or 4 variables, 1 drawn from each of these 3 or 4 clusters, rather than simply assessing conviction alone (e.g. Watts et al. 1973; Milton et al. 1978) or conviction and preoccupation alone (e.g. Hole et al. 1979; Hartman and Cashman 1983).

The factors extracted by Kendler et al. (1983), from the 5 dimensions measured, were those of delusional involvement with high loadings on conviction and pressure (preoccupation) and of delusional construct with high loadings on extension (the degree to which the belief involves different areas of one's life), disorganisation and bizarreness. These factors do not relate clearly to the components presented here; this is however understandable since, in the Kendler et al. study rather fewer measures were taken, and none of distress; furthermore, the variables were observer- and not self-rated. It is a matter of debate, perhaps, whether the delusional experience is best assessed by observers or by self-report.

In this study, an attempt was made to obtain a representative sample of delusional psychiatric patients and to assess the nature of their beliefs. The diagnostic breakdown, allowing for transatlantic differences, is not dissimilar to that of the Kendler et al. sample of 52 subjects in a similar enterprise. However the extent to which results can be generalised must be a matter of further investigation.

Despite any limitations of sample size and representativeness, however, the evidence is accumulating to support the

contention that delusions may be regarded as multi-dimensional, and, while characterised by conviction, may take many different forms. From the 11 variables assessed here, 4 components were extracted. It is suggested, that the distress, obtrusiveness and concern experienced by the deluded patient should be considered in the assessment of delusions, in addition to the belief strength. It is hoped that taking account of these variables may cast further light on the nature of this still puzzling phenomenon, the delusion.

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## References

- American Psychiatric Association (1978) Diagnostic and statistical manual III. Washington DC
- Bleuler E (1911) Dementia praecox or the group of schizophrenias. (Translated by Zinkin I (1950)) International University Press, New York
- Forgus RH, De Wolfe A (1974) Coding of cognitive input in delusional patients. *J Abnorm Psychol* 83:278-284
- Garety PA (1985) Delusions: Problems in definition and measurement. *Br J Med Psychol* 58:25-34
- Hartman LM, Cashman FE (1983) Cognitive-behavioural and psychopharmacological treatment of delusional symptoms: A preliminary report. *Behav Psychother* 11:50-61
- Hole RW, Rush AJ, Beck AT (1979) A cognitive investigation of schizophrenic delusions. *Psychiatry* 42:312-319
- Jaspers K (1913) General psychopathology. (Translated by Hoenig J, Hamilton MW (1959)) Manchester University Press, Manchester
- Kendler KS, Glazer WM, Morgenstern H (1983) Dimensions of delusional experiences. *Am J Psychiatry* 140:466-469
- Kraepelin E (1899) Dementia praecox and paraphrenia. ((Translated from 8th German edn by Bradley RM) Robertson GM (ed) 1919) Textbook of Psychiatry, vol III. Section on endogenous dementias. Livingstone, Edinburgh
- Mayer-Gross W, Slater E, Roth M (1969) Clinical psychiatry, 3rd edn. Balliere, Tindall & Cassell, London
- Milton F, Patwa VK, Hafner RJ (1978) Confrontation vs belief modification in persistently deluded patients. *Br J Med Psychol* 51:127-130
- Mullen P (1979) Phenomenology of disordered mental function. In: Hill P, Murray R, Thorley G (eds) Essentials of postgraduate psychiatry. Academic Press, London, pp 17-21
- Rachman S (1983) Irrational thinking, with special reference to cognitive therapy. *Adv Behav Ther* 5:63-88
- Snaith RP, Ahmed SN, Mehta S, Hamilton M (1971) Assessment of the severity of primary depressive illness. *Psychol Med* 1:143-149
- Stern RS, Cobb JP (1978) Phenomenology of obsessive compulsive neurosis. *Br J Psychiatry* 132:233-239
- Strauss JS (1969) Hallucinations and delusions as points on continua function. *Arch Gen Psychiatry* 20:581-586
- Watts FN, Powell GE, Austin SV (1973) The modification of abnormal beliefs. *Br J Med Psychol* 46:359-363
- Wing JK, Cooper JE, Sartorius N (1974) The Measurement and Classification of Psychiatric Symptoms. Cambridge University Press, Cambridge

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