ORIGINAL RESEARCH

Delusions and Self-Esteem

B Bowins, MD, FRCPC[1], G Shugar, MD, FRCPC[2]

Objective: To investigate the hypothesis that the content of delusions and hallucinations is significantly influenced by subjects' global self-esteem and by 5 specific areas of self-esteem.

Method: The delusions and hallucinations of 40 psychotic patients were assessed by 2 independent raters for content indicative of positive or negative self-esteem and for the extent to which the delusional content would be self-enhancing (or diminishing) and comforting (or discomforting) to the subject. These ratings were correlated with the results of self-esteem inventories completed by the subjects.

Results: The content of delusions reflects both global self-esteem and self-regard.

Conclusions: This study demonstrates that 2 specific personality factors, global self-esteem and self-regard, are reflected in the content of delusions and influence whether those delusions are experienced as comfortable (or uncomfortable) and enhancing (or diminishing). Delusional content is therefore consistent with patients' views of themselves, and this may partially account for the persistence of delusions.

The content of delusions and hallucinations varies from one patient to another, which suggests that intrapsychic factors influence content. Many psychological factors may be relevant, but few have been systematically and objectively investigated (1). Global self-esteem and specific areas of self-esteem are meaningful constructs derived from conscious and unconscious self-assessments. Thus self-esteem is one intrapsychic factor that may be considered likely to influence the content of delusions and hallucinations.

If the content of delusions and hallucinations reflects an individual's self-esteem, lower self-esteem would promote less favourable content while higher self-esteem would be reflected by more positive content. Alternatively, if the content of delusions and hallucinations defends self-esteem, lower self-esteem would produce more favourable, self-enhancing content. Higher self-esteem would not need to be defended against and would likely result in more varied content. The literature supports both alternatives. Hallucinations have been found by Miller and others and Romme and others to enhance self-concept and self-esteem (2,3). Kaney and Bentall suggest that delusions of persecution maintain self-esteem by attributing blame for negative events to other people or circumstances (4). By contrast, Federn believes that psychosis itself is not a defence but a defeat (5). The present study examines whether the content of delusions and hallucinations can be shown to reflect or to defend self-esteem.

Method

Subjects

The study took place on 2 inpatient units, one a general adult unit and the other a chronic schizophrenia unit. Both were at the Clarke Institute of Psychiatry, a university-affiliated teaching centre in Toronto, Canada. Forty-seven successive admissions were recruited who met inclusion criteria for the study, such as having experienced active psychosis within the past month. Forty subjects gave informed consent and completed the study within 2 weeks. Seven patients refused to take part in the study for reasons that suggested a fear of manipulation or persecution. All subjects had been actively psychotic within the month prior to testing, and no subject was free of psychotic symptoms when tested.

Instruments

The following scales were used in the study: 1) the Present State Exam (PSE); 2) the Coopersmith Self-Esteem Inventory (SEI); 3) the Self-Rating Scale (SRS); 4) a scale for subjects to rate their comfort or discomfort with each delusion or hallucination; 5) a similar scale for raters to assess the comforting or discomforting effect of each delusion and hallucination; 6) a scale for subjects to rate the self-enhancing or self-diminishing dimension of each delusion or hallucination; 7) a similar scale for raters to assess the self-enhancing or self-diminishing effect of each delusion and hallucination; and 8) a scale for raters to identify the specific areas of self-esteem reflected in the content of each delusion and hallucination.

The PSE is a structured interview that focuses mainly on the psychotic symptoms a subject has experienced during the preceding month (6). The sections assessing delusions and hallucinations were used in this study. The PSE includes criteria for highly probable and less probable ratings. Only delusions and hallucinations meeting the highly probable criterion were included in the study. This increased the probability that overvalued ideas and illusions were excluded.

The SEI measures global self-esteem (7). Adult and child forms of the inventory have been developed, and over 100 studies have assessed the reliability and validity of these measures. Test–retest reliability is 0.80 for male college students and 0.82 for female college students. Reliability coefficients for internal stability were 0.74 for males and 0.71 for females (8). Kokenes confirmed the construct validity of the subscales as measuring sources of self-esteem (9,10). The adult SEI form used in this study contains 25 items.

The SRS is a revised version of Janis and Field's Feelings of Inadequacy Scale. Factor analysis of the SRS produced 5 clusters of self-esteem: self-regard, interpersonal relationships, school and work abilities, physical appearance, and physical abilities (11). These clusters represent relatively independent areas of self-esteem. Test–retest reliability of the SRS is significant beyond the 0.0001 level (11). Construct validity of the SRS is evidenced by correlations between each of the SRS subscales, the SRS total, and the Rosenberg scale, which is a global self-esteem scale (11).

The remainder of the scales were designed for the present study. Two of these scales rated subjects' reactions to each delusion or hallucination they experienced. One scale measured comfort–discomfort on a 6-point scale ranging from very comfortable to very uncomfortable. The other measured the enhancing–diminishing effects of each delusion or hallucination, such as the degree to which each made them feel better or worse about themselves. The 6-point scale ranged from very negative to very positive.

Three scales were designed for use by the raters. One scale asked raters to independently assess each delusion and hallucination for content related to global self-esteem or to each of the 5 specific areas of self-esteem measured by the SRS. The original criteria used to construct the SEI and SRS were used to develop these scales, so that the self-esteem assessed by the raters closely matched the self-esteem measured by the SEI and SRS. The content was rated as positive (+1 or +2), negative (-1 or -2), or neutral (0).

The other 2 scales required the raters to independently judge the content of each delusion or hallucination as comfortable (+1) or uncomfortable (-1) and enhancing (+1) or diminishing (-1) to the subject. This was a forced choice with no neutral (0) rating provided.

Procedure

Competent subjects who provided informed consent were interviewed within 14 days of admission using the PSE. Immediately upon reporting a delusion or hallucination, the subject was asked to complete the scales assessing the comforting or discomforting and the enhancing or diminishing effects of the psychotic experience. Following the structured interview, subjects completed the SEI and SRS, and this ended their participation in the study. Information on variables such as age, education, medications prescribed, and length of illness was obtained from each subject's chart. The DSM-III-R discharge diagnoses recorded on subjects' charts were used for the study.

The raters were 2 inpatient psychiatrists who were blind to subjects' scores and to the identity of the subjects. Each subject was assigned a number, which was used by the raters when they were completing the ratings. The raters completed their assessments independently.

Results

Diagnosis

Schizophrenia was the most common diagnosis (N = 21, 53%). Schizoaffective disorder, manic episode and major depressive episode with psychotic features were each diagnosed in 5 subjects. Organic delusional disorder was diagnosed in 2 subjects, drug-induced psychosis in 1 subject, and delusional disorder in 1 subject.

Categories of Delusions and Hallucinations

One hundred and fifty-nine delusions were reported by the 40 subjects (mean 3.80, range 0–12). The most frequent were delusions of reference [37], persecution [29], grandiose delusions [23], and delusions of control [16]. Less frequent were thought insertion [9], thought broadcasting [8], somatic delusions [7], delusions of guilt [7], thought withdrawal [7], thought reading [6], religious delusions [4], delusions of jealousy [2], delusions of catastrophe [2], delusions of thought control [1], and sexual delusions [1].

The number of hallucinations reported by the 40 subjects was 58 (mean 1.45, range 0–5). Auditory hallucinations were most frequent [30], followed by visual [19], tactile [4], olfactory [3], and gustatory [2] hallucinations.

Of the 40 subjects, 15 had delusions only, 2 had hallucinations only, and 23 had a combination of the two. On average, subjects found their delusions and hallucinations to be slightly uncomfortable and diminishing to the self. For delusions, the mean comfort level was 2.61 on a 6-point scale, with a score of 3 being slightly uncomfortable and 2 being moderately uncomfortable. The mean enhancement effect was 2.81 out of 6 (a score of 3 being slightly diminishing and 2 being moderately diminishing). The mean comfort level and enhancement effect for hallucinations were somewhat lower at 2.40 and 2.28 respectively.

Self-Esteem Measures

The mean scores for global self-esteem (SEI) were 50.3 for females (range 0–92) and 54.7 for males (range 7–96). These are lower than the scores reported for the general population of 71.6 for females and 68.4 for males (7). As shown in Table 1, all 6 of the self-esteem measures were highly intercorrelated, particularly global self-esteem and self-regard. This pattern indicates that these 6 areas of self-esteem are partially independent but also share varying amounts of overlap. The lowest shared variance is for school and work abilities and physical appearance (0.18). The robust correlation between the SEI and the self-regard subscale ($r = 0.82$, $P = 0.000$) indicates a shared variance of 0.68, or approximately 70% overlap.

Table 1. Correlations and shared variance between global self-esteem and 5 specific areas of self-esteem

	Self-regard	Interpersonal relationships	School and work abilities	Physical appearance	Physical abilities
The Coopersmith Self-Esteem Inventory					
Correlation	0.82[a]	0.70[a]	0.66[a]	0.49[b]	0.65[a]
Shared variance	(0.68)	(0.49)	(0.43)	(0.23)	(0.42)
Self-regard					
Correlation	—	0.68[a]	0.74[a]	0.51[b]	0.66[a]
Shared variance	—	(0.46)	(0.54)	(0.26)	(0.44)
Interpersonal relationships					
Correlation	—	—	0.57[a]	0.56[a]	0.59[a]
Shared variance	—	—	(0.32)	(0.32)	(0.35)
School and work abilities					
Correlation	—	—	—	0.42[d]	0.57[a]
Shared variance	—	—	—	(0.18)	(0.33)
Physical appearance					
Correlation	—	—	—	—	0.47[c]
Shared variance	—	—	—	—	(0.23)
Physical abilities					
Correlation	—	—	—	—	—
Shared variance	—	—	—	—	—

[a] $P = 0.000$; [b] $P < 0.001$; [c] $P < 0.002$; [d] $P < 0.01$.

Interrater Reliability

Interrater reliability was calculated for delusions and for hallucinations in all categories of self-esteem for which there were sufficient numbers. For delusions, the correlations were very high and ranged from 0.91 (global self-esteem) to 0.83 (school and work abilities) The correlations for hallucinations ranged from 0.85 (interpersonal self-esteem) to 0.47 (self-regard).

Correlations for Self-Esteem and the Content of Delusions and Hallucinations

Subjects' scores for global self-esteem and specific types of self-esteem were correlated with the 2 raters' averaged ratings of each delusion or hallucination for positive or negative content in the same area of self-esteem. As seen in Table 2, subjects' global self-esteem ($r = 0.36$, $P = 0.028$) and self-regard ($r = 0.35$, $P = 0.032$) demonstrated positive correlations with raters' content ratings for delusions. The higher or lower a subject's global self-esteem or self-regard, the more their delusional content was found to indicate positive or negative global self-esteem and positive or negative self-regard respectively. No significant correlations were found for delusions or for the other 4 specific areas of self-esteem. No significant correlations were found for hallucinations or for any of the 6 areas of self-esteem.

Table 2. Correlations between global self-esteem and self-regard in subjects and in subjects' delusions as scored by raters

Subjects' scores for	Raters' scores for content of delusions indicating	
	Global self-esteem	Self-regard
Global self-esteem	0.3558 $P = 0.028$	0.3875 $P = 0.016$
Self-regard	0.3460 $P = 0.028$	0.3483 $P = 0.032$

Each subject's 6 self-esteem scores were correlated with their average ratings of comfort and enhancement for their delusions and hallucinations. Positive correlations were found between delusions and global self-esteem ($r = 0.38$, $P = 0.017$) and delusions and self-regard ($r = 0.36$, $P = 0.28$). The higher one's global self-esteem and self-regard, the higher the comfort level and the enhancement effect of the delusional content. Subjects' comfort ratings and enhancement ratings for delusions are highly correlated ($r = 0.75$, $P = 0.001$), which indicates that while comfort and enhancement measure independent variables, there is substantial overlap.

Insignificant correlations were obtained for delusions and interpersonal relationships, school and work abilities, physical appearance, and physical abilities. There were no significant correlations for hallucinations.

Additional Analyses

The 28 subjects with delusions of reference and persecution were compared with the 10 subjects with other delusions using a difference between groups analysis of self-esteem measures, subject comfort and enhancement effect. Subjects rated delusions of reference or persecution as significantly less comfortable and enhancing than other delusions (comfort, $F = 2.19$, $P = 0.001$; enhancement, $F = 1.72$, $P = 0.22$). This result highlights the aversive nature of delusions of reference and persecution compared with other categories of delusions. It also casts doubt on an earlier suggestion that persecutory delusions maintain self-esteem (3).

Differences between group analyses revealed no significant differences in self-esteem measures, number of delusions, or number of hallucinations for sex, age, education, class of medication prescribed, and length of illness.

Discussion

Self-Esteem

The results of this study support 2 of the main hypotheses. Global self-esteem is positively correlated with delusional content indicating global self-esteem. Accordingly, delusions reflect global self-esteem. The higher (or lower) a subject's global self-esteem, the more (or less) their delusional content indicates the same. While a correlational study cannot establish directionality, we find it more likely that the content of delusions reflects self-esteem than the favourable content of delusions results in improved self-esteem. This conclusion is based on the fact that self-esteem is relatively more stable than delusions. Self-esteem shifts only gradually. Engel

found that adolescents' self-esteem tended to remain stable over a 2-year period (12). Self-esteem in adults is likely to be even more resilient to change and only shift in response to prolonged changes that impact on the person. By contrast, delusions routinely fragment and fade with resolution of psychotic states and may not be remembered afterwards. Consistent with this view is the finding that subjects with higher global self-esteem found the content of their delusions more comfortable and enhancing than did subjects with lower global self-esteem.

The content of delusions also reflects the self-regard of subjects. In part, this correlation results from the overlap between global self-esteem and self-regard, which have a shared variance of 0.68. In rating self-regard, raters were also rating many aspects of global self-esteem. As would be expected, the correlation between subjects' SEI scores and the self-regard contents of their delusions ($r = 0.39$, $P = 0.016$) is as strong as the correlation between subjects' self-regard scores and the self-regard content ($r = 0.35$, $P = 0.032$). Nevertheless, to the extent to which it is independent, self-regard is also reflected in the content of delusions.

The specific areas of school and work abilities, physical appearance, physical abilities, and interpersonal relationships are not reflected in the content of delusions. For the first 3 of these, this may be because too few of our subjects had delusions with these contents to achieve statistical significance.

In contrast to delusions, hallucinations show no significant correlations or consistent trends between the content and self-esteem scores. We suspect that this may be due to fundamental differences in the nature of delusions and hallucinations, which makes it more likely that delusions would subserve psychological processes. Unlike hallucinations, delusions are cognitive, conceptual, and, like dreams, may be unconsciously structured to reflect psychological processes. Patients may recognize hallucinations as abnormal and unnatural and resist or reject their content. By contrast, patients have no insight into the falsity of their delusions and endorse them as real and meaningful. Hallucinations are more likely than delusions to be intermittent, transitory, or fragmentary. They are perceptual processes, not cognitive processes, and may be devoid of psychological content. For example, a hallucination of taste has no particular psychological import. The associated delusion that one is being poisoned, however, obviously does.

Conclusions

There is a general agreement that the contents of delusions are determined by various intrapsychic factors. Theoretical suggestions that delusions may act to resolve or to reflect intrapsychic conflict have been made by numerous schools of personality development and of ego psychology. Overall, the theorized relationships remain elegantly argued but scientifically unestablished. The current study provides clear evidence that the content of delusions reflects both global self-esteem and self-regard. With correlations of 0.3558 and 0.3483 respectively, these 2 personality factors can be said to account for 12% to 15% of the variance in 1 aspect of the content of delusions. Further studies are required to identify, specify, and establish which other personality factors and dynamics account for other specific aspects of delusional content.

The clinician who is aware of this relationship may evaluate patients' self-esteem by assessing their comfort and sense of enhancement with their delusions. Low comfort and enhancement suggest low global self-esteem and self-regard, while higher levels indicate higher global self-esteem and self-regard.

This study offers a suggestion as to why many delusions are egosyntonic and why patients fight for them rather than against them. In reflecting the level of patients' self-esteem and self-regard, delusions are consistent with patients' views of themselves.

Clinical Implications

- This study establishes that the content of delusions is linked to measurable psychological processes. Specifically, self-esteem influences the content of delusions.
- Assessing delusions can inform the clinician about self-esteem, and improving self-esteem may modify delusions.

Limitations

- In contrast to global self-esteem, the concept of specific areas of self-esteem is not well validated.
- Possible psychological mechanisms by which delusional content reflects self-esteem remain to be investigated.
- Psychological variables other than self-esteem remain to be investigated.

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Résumé

Objectif : Vérifier l'hypothèse selon laquelle le contenu des idées délirantes et des hallucinations a beaucoup d'influence sur l'estime de soi globale des sujets et sur cinq zones spécifiques de l'estime de soi.

Méthode : Deux juges indépendants ont évalué les idées délirantes et les hallucinations de 40 patients psychotiques en fonction d'un contenu révélant une estime de soi positive ou négative et de la mesure dans laquelle le contenu délirant serait auto-améliorant (ou détériorant) et sécurisant (ou insécurisant) pour le sujet. Ces évaluations ont été mises en corrélation avec les résultats des inventaires de l'estime de soi remplis par les sujets.

Résultats : Le contenu des idées délirantes reflète à la fois l'estime de soi globale et la perception de soi.

Conclusions : Cette étude prouve que deux traits de personnalité spécifiques, l'estime de soi globale et la perception de soi, se reflètent dans le contenu des idées délirantes et qu'ils contribuent à déterminer si ces idées délirantes sont ressenties comme sécurisantes (ou insécurisantes) et améliorantes (ou détériorantes). Le contenu délirant correspond ainsi à la perception que les patients ont d'eux-mêmes, et cela peut en partie expliquer la persistance des idées délirantes.

[1]Psychiatrist in Private Practice, Toronto, Ontario.

[2]Staff Psychiatrist, General Psychiatry Division, Clarke Institute of Psychiatry, Toronto, Ontario; Associate Professor, Department of Psychiatry, University of Toronto, Toronto, Ontario.

Address for correspondence: Dr B Bowins, 2200 Yonge Street, Suite 1700, Toronto, ON M4S 2C6