



## NOTES AND SHORTER COMMUNICATIONS

### EPQ-R personality correlates of bulimia nervosa in an Australian twin population

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**Summary**—Women with bulimia nervosa and controls were compared on their short-form Eysenck Personality Questionnaire—Revised (EPQ-R) scores. It was found that women with bulimia nervosa scored significantly higher on neuroticism and significantly lower on the Lie Scale. This latter result could not be explained by differentiation of the Lie Scale into its two components, social desirability and ‘faking good’.

#### INTRODUCTION

Although a number of personality correlates of bulimia nervosa have been investigated, such as self esteem, locus of control and assertiveness (Williams & Chamove, 1990), novelty seeking, reward dependence and harm avoidance (Brewerton, Hand & Bishop, 1993), and interpersonal sensitivity (Kent & Clopton, 1988), very few studies have examined the relationship between the Eysenck Personality Questionnaire (EPQ) and bulimia nervosa. Those studies that have been carried out suggest that bulimia nervosa is associated with high levels of neuroticism (Kendler, MacClean, Neale, Kessler, Heath & Eaves, 1991; de Silva & Eysenck, 1987; Feldman & Eysenck, 1986), high levels of psychoticism and low levels of extraversion (de Silva & Eysenck, 1987; Feldman & Eysenck, 1986).

Although the Lie Scale was originally designed as a methodological check, it has been suggested that it is a personality dimension in its own right, functioning as a measure of social conformity or desirability (Francis, Philipchalk & Pearson, 1991b; Francis, Brown & Pearson, 1991a; Francis, 1991). One would predict that this scale should be positively correlated with bulimia nervosa, a disorder that has been described as being characterized by women who are “dependent, unassertive, eager to please, and concerned with social approval” (Striegel-Moore, Silberstein & Rodin, 1986). Only one study, that of Feldman & Eysenck (1986), has investigated the relationship between Lie Scale scores and bulimia nervosa. They found that 45 women who were in treatment for bulimia nervosa [as assessed by Russell’s (1979) criteria] scored lower (though this was not a significant difference) on the Lie Scale than a group of controls, a finding in the opposite direction to that predicted.

It has been suggested that the Lie Scale consists of two distinct components, component A being a social conformity factor and component B being a more pure version of the ‘faking good’ measure that the Lie Scale was originally intended to measure (Francis *et al.*, 1991a, b; Francis, 1991). Component A is higher in women than men, and is negatively correlated with extraversion and psychoticism, whereas component B is not correlated with gender or any scale of the EPQ.

The aim of this study is twofold: first, to endeavour to replicate the surprising finding of the negative relationship between the Lie Scale and bulimia nervosa in a large community sample of women and, second, to investigate whether differentiation into components A and B can help explain this unexpected relationship.

#### METHOD

Over 1988–1989 a self-report questionnaire of general health questions was sent out to twin pairs registered with the Australian National Health and Medical Research Council Twin Register. Included were the short-form of the Eysenck Personality Questionnaire—Revised [EPQ-R (Eysenck, Eysenck & Barrett, 1985)] and a short questionnaire relating to any past or present problems with eating. These eating questions were completed only by women. For further details of the sample, see Heath, Cloninger and Martin (1994).

There were 3704 women in the final sample with an age range of 24–86 yr and mean age of 41.6 yr (SD = 12.9). Using DSM-III-R criteria (American Psychiatric Association, 1987), 58 (1.6%) of the women were diagnosed as having a lifetime prevalence of bulimia nervosa. Also available were earlier EPQ results from an earlier mailed survey (1980–1981).

#### RESULTS

A significant positive association with neuroticism was found such that women with bulimia nervosa scored significantly higher on the neuroticism scale than women without bulimia nervosa,  $t(3566) = -5.4$ ,  $P < 0.01$ , as can be seen in Table 1. There was no significant relationship between bulimia nervosa and extraversion or psychoticism.

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Table 1. Relationships between bulimia nervosa and short-form EPQ-R scales

EPQ-R scales	Bulimia nervosa (N = 58) Mean (SD)	Control women (N = 3704) <sup>a</sup> Mean (SD)
Extraversion	25.3 (8.00)	25.7 (7.05)
Neuroticism	26.4 (6.49)	21.8 (6.33)**
Psychoticism	15.3 (3.05)	15.1 (2.77)
Lie Scale	20.4 (5.20)	25.1 (5.63)**
Component A	9.9 (3.02)	12.4 (3.23)**
Component B	10.4 (2.78)	12.7 (3.01)**

\*\*  $P < 0.01$ .<sup>a</sup> N's may vary slightly due to missing values.

With respect to the Lie Scale, significant negative associations were found. Women with bulimia nervosa scored significantly less on the Lie Scale than women without bulimia nervosa,  $t(3561) = 6.3$ ,  $P < 0.01$ . This difference was significant for both components A and B, that is, the scores were lower on both social conformity,  $t(3597) = 5.7$ ,  $P < 0.001$ , and 'faking good',  $t(3608) = 5.7$ ,  $P < 0.001$ .

Given these results, we examined the same Lie Scale items from the earlier (1980–1981) mailed questionnaire survey. The women currently diagnosed as having bulimia nervosa had also scored significantly lower on the Lie Scale 8 yr earlier than the control women (respective means of 30.97, SD = 2.49 and 32.30, SD = 2.89),  $t(7613) = 3.52$ ,  $P < 0.001$ .

### DISCUSSION

Using the EPQ-R (short form) with a large community sample, we have been able to replicate Feldman and Eysenck's (1986) counterintuitive finding that women with bulimia nervosa score significantly lower on the Lie Scale than women who do not have bulimia nervosa. This finding appears to have considerable robustness, given the differences between these two studies in terms of diagnostic criteria and form of the EPQ used, culture and samples (a community as opposed to a clinical sample). We also know that this finding is reliable over an 8-yr period. The division of the Lie Scale into its two components, however, does not help us to explain the result any further. Women with bulimia nervosa make both fewer socially conforming responses (component A) and score lower on 'faking good' items (component B) when compared to controls.

We suggest one possible explanation for the result may be that the Lie Scale is reflecting the tendency of eating disordered people to have a dichotomous thinking style (Zotter & Crowther, 1991), especially in relation to the high performance expectations. This may lead women with bulimia nervosa to judge themselves more harshly than others and to discount any 'good' things that they have done. The finding that the difference in Lie Scale scores was present in 1980 (though of a smaller magnitude) suggests the possibility that this may be a predisposing factor to bulimia nervosa rather than simply a product of disturbed eating patterns. It would be valuable for further research to specifically isolate this style of thinking and to examine its relationship with both bulimia nervosa and Lie Scale scores, particularly in a longitudinal study.

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