

[▲ Home](#)[◀ Contents](#)**The interrelationship of social anxiety with anxiety, depression, locus of control, ways of coping and ego strength amongst university students***by Robin-Marie Shepherd and Robert J. Edelman***Abstract**

This is the first study to investigate the interrelationship of social anxiety with the variables anxiety, depression, locus of control, ego strength and ways of coping in a sample of university students. There were high scores of social anxiety which were related to high scores on measures of anxiety and depression, low ego strength, external locus of control and emotion coping rather than problem focused coping. While the results are relational rather than being predictive of causality they raise a number of issues with regard to theory, prevention, intervention and promoting mental health within a university setting.

Research suggests that there has been an increase in the use of mental health services amongst university students. Of relevance to the present study the findings of a survey in the UK reported that adjusting to university life was a concern to 35% of the students surveyed while 20% were very concerned about coping with anxieties such as phobias or panic attacks and 35% expressed concern regarding depression or mood changes. In another study, Webb and colleagues (1996) reported that 54% (N= 3057) of their large sample of university students reached the sub-threshold for anxiety and 13% of the same sample were deemed somewhat depressed. These findings suggest that many students find university life a challenging time to cope.

In particular, many students struggled to adjust to the social aspects of academic life including being assertive, improving self esteem and confidence, coping with loneliness, and improving upon relationships (e.g. intimate, friendships and family relationships) (Leicester University, 2002). Forty percent reported attending a university health centre for help with adjusting to university life and its social implications. Within this context, research suggests that between 19% and 22% of undergraduates suffer from social anxiety (Strahan 2003; Turner, Beidel, Dancu & Keys, 1989) with little difference between genders (Izgcic, Akyuz, Dogan & Kugu 2004).

Social anxiety disorder is a fear of negative evaluation from others which is greatly distressing to the individual (Leary, 1983). The lifetime prevalence rates of social anxiety in the general population

have been reported as varying between 2.4% and 16% (Schneier, Johnson, Hornig, Liebowitz & Weissman 1992; Wacker, Mullejans, Klein & Battagay, 1992).

Social Anxiety and Comorbidity Research indicates that both clinical and nonclinical cohorts of socially anxious populations report suffering from co-morbid conditions namely anxiety and depression; high rates of suicide and suicidal ideations are also reported (Rodney, et.al., 1997).; Adamson, Todd, Sellman, Huriwai & Porter, 2006; Stein, McQuaid, Laffaye & McCahill, 1999; Andersch & Hanson, 1993; Schneier et. al., 1992). The presence of such co-morbid conditions amongst the socially anxious is suggestive of coping difficulties.

Ways of Coping

Lazarus and Folkman's (1984) transactional theory of coping depicts coping as an ongoing cognitive and behavioural process between the individual and his or her environment. The process of coping is viewed as involving three steps: first, the individual detects something threatening (primary appraisal), second; the individual assesses the situation (secondary appraisal); third, an individual takes action (coping). Folkman and Lazarus (1985) posit that there are two main types of coping: problem solving and emotion-focused coping.

Within the general population samples, the use of a combination of emotion-focused and problem-focused strategies is commonly reported (Folkman, 1984; Folkman & Lazarus, 1988). However, research suggests that individuals suffering from social anxiety are more likely than their non-socially anxious counterparts to use avoidance/escape and other emotion-focused strategies and less likely to execute problem-solving coping (Sandin & Chorot, 1993). This is consistent with Stopa and Clark's (1993) finding that socially anxious individuals had more thoughts about avoidance behaviour and fewer thoughts about planning compared to controls.

Locus of Control

One factor likely to influence coping capability is locus of control. The concept of locus of control, within the framework of social learning theory, depicts internal and external strength of reinforcement (Rotter, 1966). Thus, the internal and external locus of control variable integrates the behavioural paradigm of stimulus and response with cognitive theory to explain behavioural expectancies. If the behaviour is viewed as determined by one's own influence the locus of control is labelled internal and individuals with a tendency to internality are considered to be better psychologically adjusted than externals. On the contrary, if the expectancy for the behaviour is perceived as being outside one's control it is considered 'external' (Rotter, 1975). External factors include beliefs in luck, fate, and chance. In a study of relevance, socially anxious individuals obtained high 'powerful others' subscale scores on Levenson's locus of control scale (Cloitre, Heimberg, Liebowitz & Gitow, 1992). In contrast, Mattick and Clarke

(1998) employing a different scale (locus of control of behaviour scale) reported a non-significant relationship between locus of control and social anxiety. These contradictory findings indicate the need for further research with regard to social anxiety and locus of control.

Ego Strength

Another aspect of the self which plays a role in regulating affect, such as social anxiety, is the ego. The ego, the inner structure of the self, regulates feelings, relationships and self esteem as well as detecting danger (signalling anxiety) and tolerating tension (see for full review Heller & Northcut, 1998). In other words, ego strength is one way to explain the interaction between coping and 'effective personal functioning' (Lake, 1985, p. 473).

Lake's (1985, p. 477) literature review on ego functioning concluded that the ego is defined as 'the notion of personal and social competence' a definition which relates to social concerns and social anxiety. However, little research has been undertaken to investigate this relationship. In two studies of relevance, one study reported that low ego strength was related to panic disorder while a further report suggested that low ego strength was related to general anxiety (Parker, Taylor, Bagby and Acklin, 1993; Sprock & Bienek, 1998). Ego strength then has potentially important implications with regard to mental health.

Social Anxiety and other mental health concerns within a university population

Given the literature reviewed above, the aim of the present study was to investigate the inter-relationship between social anxiety, coping, locus of control and ego strength in a sample of university students. Specifically it was hypothesised that high social anxiety scores will relate to lower ego strength, external locus of control, anxiety, depression, and emotion-focused coping.

Methods

Participants

Participants were recruited from a London university in class prior to lectures. Both a verbal and written explanation was provided to participants. The sample consisted of 141 university students (110 females and 31 males) aged between 18 and 54 years of age with a mean age of 26 (S.D. = 9.35). Most of the sample were single (N=116) and Caucasian (N=119). The participants were guaranteed confidentiality and were provided with helpline numbers if they felt that they had a specific problem for which they wished to receive help. The participants' name and personal details were not included in the data entry, but were replaced by a code to ensure anonymity.

The participants were asked to complete the questionnaire packet at their leisure. They were also told that they could withdraw

from the study at any time if they wished to do so. It took approximately thirty minutes to complete the questionnaire packet and the participants were instructed to post the completed questionnaires by internal mail to the Department of Psychology and Counselling.

The university ethical committee approved this study. Permission to recruit was also granted by the Heads of Counselling and Psychology, Life Science, and Sports Studies departments as well as by individual lecturers.

Measures

Levenson's Locus of Control Scale (LOC)

Levenson's Locus of Control Scale has 3 subscales comprising of 8 items in each scale (Levenson, 1981). The scores for each of the three subscales can potentially range from 0 to 48. Levenson (1981) reports norms for the subscales based upon twelve studies. The means for 'internal' ranged from the low 30s to the low 40s, with a modal score of thirty-five and a standard deviation (SD) of 7. The mean score for 'powerful others' ranged from 18-26 with a SD of 8.5 (with a modal score of 20 for a student population). The mean scores for 'chance' ranged from between 17 and 25 and a SD of 8 (with a modal mean of 18 for a student population). Levenson (1973) reports a factor computation in a student population yielding seven factors accounting for 52.3% of the variance. She reports a Kuder-Richardson reliability score of 0.67 for 'internal', 0.82 for 'powerful others', and 0.79 for 'chance' with a psychiatric population and 0.64 for 'internal', 0.77 for 'powerful others' and 0.78 for 'chance' with a student population.

Barrons Ego Strength Scale (BESS)

The revised Barrons Ego Strength Scale (Schuldberg, 1992) is a 52 item scale extracted from the MMPI-2. The original Ego Strength Scale was used to assess patients' psychological improvement in response to psychotherapy (Barron, 1953). Barron reported that the ego scale has an alpha score of 0.66; males had a mean score of 37.34 (SD 4.46) and females had a mean score of 34.37 (SD4.90).

Social Phobia and Social Interaction Anxiety Scale (SPS and SIAS)

Social Phobia Scale (SPS) and the Social Interaction Anxiety Scale (SIAS) (Mattick & Clark, 1998) is a 40 item scale with 20 items in the SPS subscale and 20 items in the SIAS subscale. Each item on the subscale is rated on a 5 point likert scale. The scores can thus potentially range from 0 to 80. The scales' authors report high internal consistency for both subscales, Cronbach's alpha ranging from 0.89 to 0.94. Test retest reliabilities ranged from 0.91 to 0.93. High scores for the social phobia subscales are considered to be scores that are one standard deviation above the group mean of that sample under

investigation. (Browne, Turovsky, Heimberg, Juster, Brown & Barlow 1997; Mattick, personal communication, 2001).

The Hospital Anxiety and Depression Scale (HADS)

The HADS (Zigmond & Snaith, 1983) is a 14 item scale, which consists of seven items, depicting anxiety symptoms and seven items depicting depressive symptoms; it has been widely used in both clinical (e.g. cancer patients) and general populations (e.g. elderly) (Moorey et al., 1991; Biringer et al., 2005). Using a Likert scale scores can range from 0 to 3 on each item with a total of 21 for either the anxiety or depression subscales. Zigmond and Snaith (1983) did not report the factor structure, but conducted Spearman correlations to check for internal consistency. The correlations ranged from 0.76 to 0.41 for the anxiety items from 0.60 to 0.30 for the depression items.

Ways of Coping Scale (WOC) for students

The WOC Scale (Folkman & Lazarus, 1985) for students consists of one problem solving subscale, six emotion-focused subscales, and one with both problem and emotion-focused items. The 'problem solving' subscale consists of eleven items with an alpha of 0.88. The 'wishful thinking' subscale consisted of five items with an alpha of 0.86. The 'detachment' subscale has six items with an alpha of 0.74. The 'seeking social support' has seven items with an alpha of 0.82. The 'focusing on the positive' has 4 items with an alpha of 0.56. The 'self blame' subscale consisted of three items with an alpha of 0.59. The 'tension-reduction' subscale has 3 items with an alpha of 0.59. The 'keep to self' subscale has 3 items with an alpha of 0.65.

Results

Sample characteristics

Twenty-six (18%) participants scored at least one standard deviation above the group mean on the Social Phobia Subscale and twenty-five (18%) participants scored at least one standard deviation above the group mean on the Social Interaction Subscale. Females obtained significantly higher scores than males on the Social Phobia Subscale ($P < 0.05$; men mean rank = 57.12 vs. women's mean rank 73.55). Nineteen of these participants scored at least one standard deviation above the group mean on both subscales. Overall, thirty-seven scored between 8-10 on the anxiety subscale of the HADS indicating possible pathology with 44 scoring over the threshold of 10 or more for clinical anxiety. Fourteen of the participants' scores ranged from 8 to 10 on the depression subscale indicating possible depression with nine participants scoring within the clinical range. Those individuals who scored in the clinical range for both the anxiety and depression subscales also scored under the group mean for ego strength (see table 1). The means for both male and females for ego strength were lower than reported by Schuldberg (1992). (37.34 vs. 34.19 for males and 34.37 vs. 31.20 for females).

Table 1

Interrelationship between Measures

Bivariate Correlations

Bivariate correlations were conducted to test the study's hypotheses. In line with the hypothesis there were significant correlations between the social phobia subscales (SPS & SIAS) and the hospital anxiety and depression subscales (HADS) (both at $p < 0.01$). As predicted, lower ego strength scores were related to higher scores on both social phobia subscales (both at $p < 0.01$) as well as the hospital anxiety and depression subscales (both at $p < 0.01$).

There was a significant positive correlation between ego strength and internality ($p < 0.01$) and significant negative correlations between ego strength and both external locus of control subscales (both at $p < 0.01$). There were also significant negative correlations between ego strength and a number of emotion focused ways of coping (detaching from self, blame self, wishful thinking, keeping to self).

There were significant positive correlations between social interaction subscale scores with the 'wishful thinking' ($p < 0.01$) and 'keep to self' ($p < 0.01$) subscales of the ways of coping checklist. There was a negative correlation between the social interaction subscale with the 'seeking social support' coping subscale ($p < 0.05$). The social phobia subscale was positively correlated with 'self blame' ($p < 0.05$), 'wishful thinking' ($p < 0.05$), and 'keep to self' ($p < 0.01$).

There were significant correlations between both social phobia subscales and the chance and powerful Others locus of control measures ($p < 0.01$). A negative correlation emerged between the social phobia subscale and Internality ($p < 0.01$) as well as the Social Interaction subscale and Internality ($p < 0.05$). There were significant correlations between the hospital anxiety and depression subscale scores and the chance and powerful others subscale of the LOC ($p < 0.01$). However, only the depression subscale yielded a significant negative correlation with internality ($p < 0.05$) (see Table 2 and 3).

Table 2

Table 3

Partial Correlations

Given the problem of comorbidity of social anxiety with anxiety and depression and the high correlations between the social phobia subscales and the HADS subscales, two sets of partial correlations were computed. The aim was to examine the strength of the

relationship between social anxiety and the other variables under investigation controlling for anxiety in one computation and depression in the other.

When controlling for depression and anxiety, similar relationships emerged between the social phobia subscales and ego strength. When partialling out depression, although still significant, the relationship between 'social phobia' subscale scores with 'blame' subscale and 'keep to self' subscale decreased; the relationship between the 'social interaction' subscale with 'wishful thinking' subscale and 'keep to self' subscale also decreased. There was no longer a relationship between both 'social phobia' subscale scores and the 'seeking social support' subscale. When partialling out anxiety, although still significant, the relationship between both 'social phobia' subscale scores and the 'wishful thinking' subscale decreased, while there was no longer an association with 'self blame' subscale. In addition, there was no longer a relationship between internality subscale and the social interaction subscale scores when partially out comorbidity (See tables 4 & 5)

Table 4

Table 5

Discussion

The results are in line with the hypothesis that social anxiety relates to anxiety, depression, low ego strength, externality and emotion focused coping.

Eighteen per cent of the current sample of university students obtained high scores on the measures of social anxiety. This is comparable with rates of social anxiety amongst university students reported in two other studies (22% and 19% respectively reported by Strahan, 2003 and Turner et al., 1989). Gender differences were evident in the present study with females obtaining significantly higher scores is in line with general population studies indicating higher prevalence rates for social anxiety amongst females (Judd, 1992). Furthermore, the results showed that social anxiety was significantly linked with anxiety and depression the latter of which may hence be potentially under recognised. For example, depression can be masked by voicing concerns about homesickness (Royal College of Psychiatrists, 2003; Fisher & Hood, 1988).

Fifty-seven percent made the threshold on the HADs anxiety subscale for anxiety and 16% were identified as depressed on the HADS depression subscale. In line with the hypothesis, individuals who scored in the clinical range for both the HADS anxiety and depression subscales also scored under the group mean for ego strength and these findings resonate with previous findings of employing the HADS to a university population (Webb et.al., 1996). These findings clearly highlight the need for vigilance amongst

universities of the high percentage of students struggling with both anxiety and depression; these conditions which can greatly affect academic performance (Royal College of Psychiatrists, 2003; Shepherd, 2006).

The means for ego strength for both males and females were lower than those reported by Schuldberg (1992) although the finding that females' mean scores were slightly lower than males' scores was consistent with his findings. Given that the measure is assumed to address personal and social competence this suggests that women rate their perceived competence as lower than men. Whether this relates to actual behaviour in line with the slightly higher prevalence rates of social anxiety among females reported in some studies or whether females more readily admit to failings in comparison to their male counterparts is difficult to discern.

The correlation between low ego strength and high scores on the social anxiety subscales is consistent with the hypothesis. These findings also support Lake's (1985, p. 473) supposition that ego strength underlies 'coping and personal functioning' as well as research indicating that ego strength amongst university students is indicative of 'psychosocial adjustment and maturity' (Marstrom & Marshall, 2007; Marstrom, Sabino, Turner & Berman, 1997, p. 727). These findings imply that ego strength may play an important role in the development and maintenance of social anxiety although further research is required both to explore this relationship and the possible mechanisms underlying it. In counselling it may though be important to address issues which strengthen ego strength and, in turn, enhance social adjustment (Sullivan, Grant & Grant, 1957).

The relationship between social anxiety and external locus of control is in line with previous findings reported for both a university student population (Emmelkamp & Cohen- Kettenis, 1975) and a clinical population (Cloitre et al., 1992). Interestingly, the association between internality and the social interaction subscale scores diminished after partialling out anxiety and depression. The significant correlations between both social phobia subscales and externality as well as significant negative correlations with internality resonates with Rotter's (1966) hypothesis that externals in comparison with internals are more vulnerable to poor psychological health. This finding supports Cloitre and colleagues (1992) that externality links with social anxiety. This is consistent with the notion that socially anxious individuals believe they have limited belief in their own ability to exert control over situations. This is also consistent with the findings that emotion focused coping ('wishful thinking' and 'keep to self' subscales) compared to problem focused coping was positively related with both social phobia subscales, while a further emotion focused strategy ('self blame' subscale) was associated with the social phobia subscale. This relates to findings that locus of control, in particular internality, and problem solving coping, influence the ability to cope with university life (Royal College of Psychiatrists, 2003). These findings emphasise the need for mental health promotion on

university settings; in the context of social anxiety an initial starting point may be where face to face interaction is not required, such as with online support or a student operated helpline.

Limitations of the study warrant attention. First, while the Ways of Coping questionnaire is assumed to measure behavioural aspects of coping, it has been suggested that it does not adequately differentiate between behaviour and attitude (Stone, Greenberg, Kennedy-Moore & Newman, 1991); hence results may not accurately reflect underlying behaviour. Second, Folkman and Lazarus (1985) argue that coping is not a stable variable, but a process with potential to change. Therefore, students may use certain coping strategies for exams, for example, and other strategies for social situations. Third, the small sample size and its restriction to a student population limit generalisability of the results. Nevertheless, in spite of such limitations results emerged in line with the hypothesis which merit comment particularly concerning mental health issues amongst a university student population. Overall, the results are relational rather than being predictive of causality which raise a number of issues with regard to theory, prevention, intervention and promoting mental health within a university setting.

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